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# PACIFIC PULP & PAPER INDUSTRY

Volume 5  
Number 5

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Lois River Power for Powell River News Print

APRIL + 1931

# LIQUID CHLORINE



ACIDS  
ALUMS  
ALUMINAS  
CAUSTIC SODA  
LIQUID CHLORINE  
BLEACHING POWDER  
GREENLAND KRYOLITH  
SODIUM HYPOCHLORITE  
AMMONIUM PERSULPHATE

THE distributing facilities of the Pennsylvania Salt Manufacturing Company besides being nation wide are highly specialized. Tank car equipment and containers are maintained in perfect condition to assure prompt service and safety to customers.

Liquid Chlorine and Caustic Soda are available the country over on short notice due to the strategic location of Penn Salt plants.

The carefully developed qualities of service which the Pennsylvania Salt Manufacturing Company has fostered have been added to the high quality of Tacoma Electrochemical Company Liquid Chlorine and Caustic Soda.

**TACOMA ELECTROCHEMICAL COMPANY**  
**TACOMA, WASHINGTON**

WESTERN DIVISION OF PENNSYLVANIA SALT MANUFACTURING CO.

Pacific Pulp & Paper Industry is published once a month—except in March, when publication is semi-monthly—at 71 Columbia St., Seattle, Wash. Subscription: U. S. and Canada, \$4.00; other countries, \$5.00. Entered as second class matter May 20, 1927, at the Postoffice at Seattle, under the Act of March 3, 1879.

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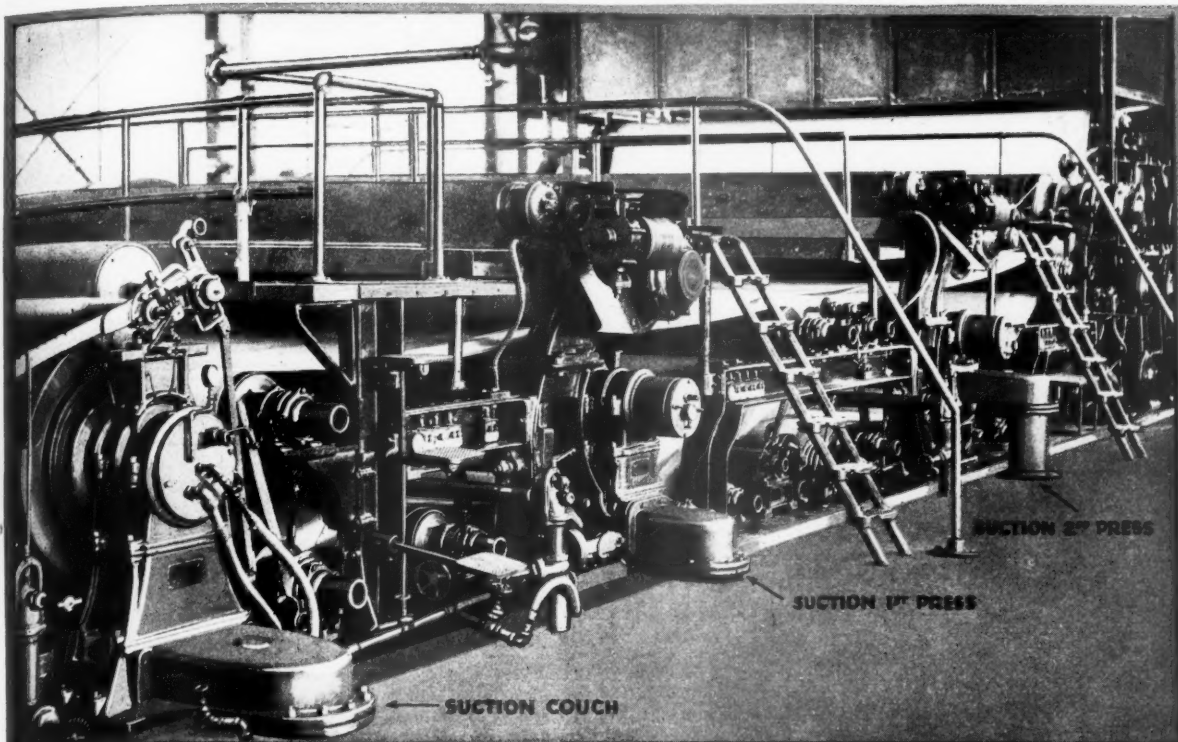
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## Smoother Operation With These Modern Beloit Press Rolls . . . .

**W**HY not get the paper as dry as possible before it gets to the dryer?

Three Beloit suction rolls on one machine are utilized by a prominent papermill in making various weights and grades of kraft at high speeds to do this very thing.

Second suction presses are coming into general use more and more. Recent experiments have demonstrated conclusively that a much dryer sheet can thus be made. There is a more uniform

moisture content, resulting in greater production and decreased steam.

This installation also makes it possible in many cases to eliminate the felt on the third press and use this press as a smoothing press, improving both the finish and closing up of book, bond, kraft, etc.

It will pay you to get the facts on the use of the Beloit Suction Couch and suction press rolls as applied to your problems. A letter brings you details.

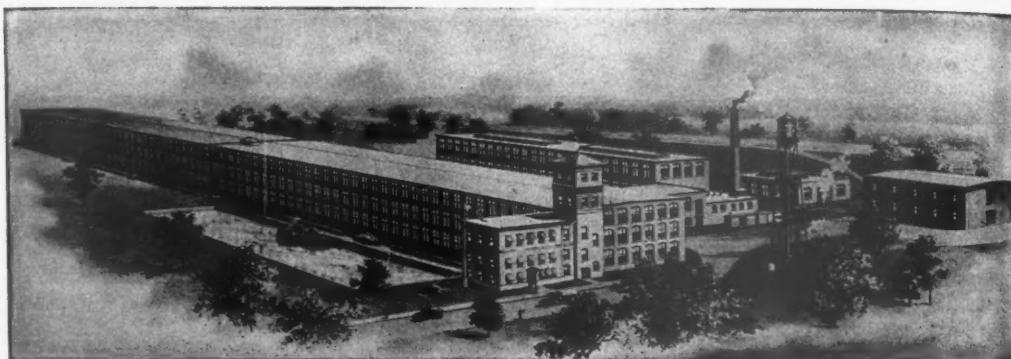
*The Beloit Way is the Modern Way.*

**BELOIT IRON WORKS, BELOIT, WIS., U. S. A.**



# The BELOIT

When writing to BELOIT IRON WORKS please mention PACIFIC PULP AND PAPER INDUSTRY



THE HOME OF ALBANY FELTS

# PULP FELTS

While new developments in paper machines have been advancing at a rapid pace, machine builders have not overlooked any opportunity to improve pulp equipment.

Albany has kept in close touch with every new development and constant study has led to the perfection of all sorts of felt designs for use on every type of pulp-making machine.

Special designs for dry machines . . . for Rogers machines . . . for ordinary wet machines . . . for Kamy machines.

If you are interested in improved felt-life and water-removal on your pulp machines, we suggest that you give us the opportunity of demonstrating what we can do for you.

## ALBANY FELT COMPANY

ALBANY, NEW YORK

# S E R V I C E

**W**ITH MODERN, EXPERT MANUFACTURING FACILITIES CONVENIENTLY LOCATED IN THE HOOKER PLANT AT TACOMA, YOUR REQUIREMENTS FOR LIQUID CHLORINE AND CAUSTIC SODA CAN BE MET PROMPTLY AND EFFICIENTLY.

OVER 25 YEARS OF EXPERIENCE IN PRODUCING QUALITY CHEMICALS STANDS BEHIND EVERY HOOKER PRODUCT.



**HOOKER  
ELECTROCHEMICAL  
COMPANY**

WESTERN PLANT—TACOMA, WASHINGTON      EASTERN PLANT—NAIGARA FALLS, N. Y.  
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## HOOKER CHEMICALS

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5447





*The Sulphate Pulp Mill of the Crown Willamette Paper Company at Camas, Washington. Photo by Brubaker Aerial Surveys.*

## FOXBORO THROUGHOUT

Because they found, from previous experience, the great value of consistent accuracy and dependability in controlling and recording instruments, the Crown Willamette Paper Company have completely equipped their Sulphate Pulp Mill in Camas, Washington, with Foxboro Instruments.

On every important process throughout the mill, one or more of these instruments are installed—Foxboro Automatic Temperature Recorder-Controllers, Recording Thermometers and Recording Pressure Gauges.

Here is a testimonial that we are proud to call to your attention. For all processes in your own mill, where knowledge and control of temperature, pressure, liquid level or flow is desirable, Foxboro can furnish the correct instrument.

We have just published a new illustrated bulletin of Thirty-six pages on Foxboro Recording Thermometers. It is yours for the asking. Send for Bulletin P.C. 169. A post card will bring it to you.

WESTERN OFFICES:  
Los Angeles, 2307 E. Eighth St.  
San Francisco, 461 Market St.  
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New York	Dallas
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THE FOXBORO COMPANY  
Neponset Ave., Foxboro, Mass., U.S.A.

**FOXBORO**  
REG. U. S. PAT. OFF.  
THE COMPASS OF INDUSTRY



*The Foxboro Recording Thermometer*

A Foxboro Recording Thermometer can be used for increased efficiency and profits in a typical sulphate pulp mill on . . .

- Caustic Tank
- Indirect Heater
- Digester
- Condenser
- Bleach Dissolving Tank
- Bleaching Tank
- Pulp Dryer
- Feed Water
- Steam
- Nordstrom Tower

INSTRUMENTS for CONTROLLING, RECORDING and INDICATING TEMPERATURE, FLOW, HUMIDITY, PRESSURE

*When writing the FOXBORO Co. please mention PACIFIC PULP AND PAPER INDUSTRY.*



## Production Rolls Smoother On Bagley & Sewall Rolls

A paper machine is basically a collection of rolls with just enough other material to hold them together. That is why Bagley & Sewall,—builder of efficient paper machines,—devotes a large section of its immense plant exclusively to rolls,—a specialized department tooled and manned for the production of every type of paper machine roll, without limitation of size or material.

Here are casting pits that, at a single pour, hatch rolls wide enough to fit the widest machines the industry boasts; precision lathes that pare down surfaces to micrometer exactness; special means for machining the *insides* of dryers to an exact thickness that furthers uniform drying, steam economy and smooth running; monster "mikes" that span five feet and gauge split thousandths of an inch; intricate devices that reveal the hidden secrets of balance, static and dynamic.

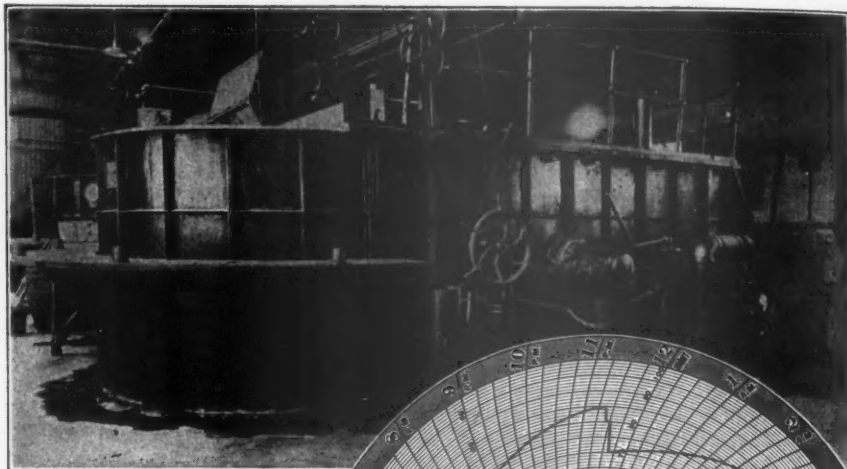
And here, too, are skilled men with a real affection for their work,—men who find fascination in eternally seeking higher standards. Bagley & Sewall ideals and capabilities in roll production are reflected on your machines in operating economies, low power consumption, longer life for wires and felts, the minimizing of broke, the stepping up of product quality. Production *does* roll smoother on Bagley & Sewall rolls.

# *The* Bagley & Sewall Co.

Watertown, N. Y.



## ... On the World's 7 Largest Pulp Beaters

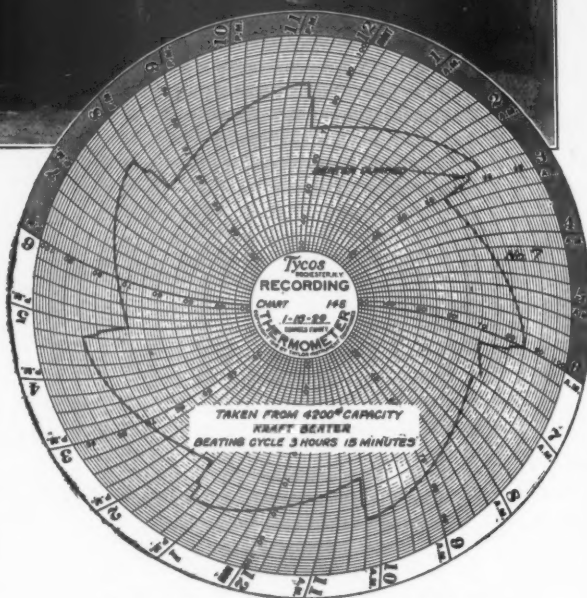


**T**HE operations of the 7 largest pulp beaters in the world—all located in one plant—are checked by *Tycos* Recording Thermometers.

These Instruments give the beater engineer a record of the time each beater was furnished and tell him approximately when it should be dumped. A chart record written by the *Tycos* Recording Thermometer each day gives the mill manager an accurate history of the beating operation during the entire 24 hours.

As the trend in the modern beating room is toward greater capacities and higher circulating speeds, it is most important to keep an accurate check of temperatures. Excessive heat materially affects the character of the stock and makes it difficult to obtain the high degree of freeness often desired.

There are over 70 applications for *Tycos* Instruments in the Paper Industry. These include Industrial and Recording Thermometers, Pyrometers, Hygrometers and Hydrometers, Temperature, and Pressure Regulators, and Pressure and Vacuum Gauges.



Photograph of one of the 7 largest pulp beaters in the world, located in a Northern paper mill, and chart record taken from one of the *Tycos* Recording Thermometers used on these beaters. The instrument on the beater shown is not visible as it is placed on the back, conveniently close to the one that can be seen on the second machine, in the left background.

*Taylor Instrument Companies*

Rochester, N. Y., U. S. A.

IN CANADA—Taylor Instrument Companies of Canada, Ltd.,  
Tycos Building, Toronto

Manufacturing Distributors in Great Britain,  
Short and Mason, Ltd., London—E. 17

# Tycos

## Temperature Instruments

INDICATING - RECORDING - CONTROLLING

When writing TAYLOR INSTRUMENT COMPANIES please mention PACIFIC PULP AND PAPER INDUSTRY.

# From December 1927

# ... to February 1931

An Oliver United Save-All similar to the one referred to in this advertisement.



## The Life of the Metal Filter Cloth on an OLIVER UNITED Save-All

THREE years ago last December a mill on the Pacific Coast installed an Oliver United Save-All.

The original metal cloth on this filter has lasted up until recently—a service of more than three years

on varying grades of stock, including sulphite tissue.

This record further substantiates the claim that Oliver United equipment is the low-cost equipment. Longer cloth life means saving money.

**BUY THIS**  
**Oliver United Equipment**

**Deckers**  
**Save-Alls**  
**Brown Stock Washers**  
**Bleach Washers**  
**High Density Thickeners**  
**Lime Mud Filters**  
**Board Forming Machines**  
**Combination Units**  
**(Decker-Washer-Save-Alls)**

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GERMANY  
Wilhelm Lill

SCHIEVENINGEN,  
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MANILA  
The Edward J.  
Nell Co.

STOCKHOLM,  
SWEDEN  
T. An Tesch

When writing to OLIVER UNITED FILTERS INC. please mention PACIFIC PULP AND PAPER INDUSTRY



For every place where a doctor is needed.

**RICE, BARTON & FALES**

INCORPORATED

WORCESTER, MASSACHUSETTS, U. S. A.

*Paper Making Machinery Since 1837*

When writing to RICE, BARTON & FALES, INC., please mention PACIFIC PULP AND PAPER INDUSTRY

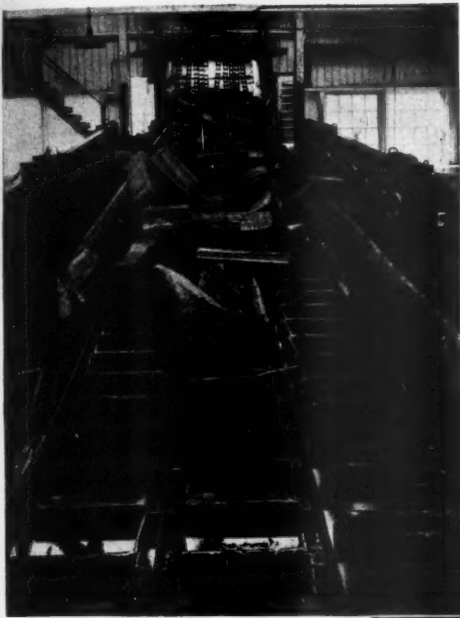
# LINK-BELT

## CONVEYORS AND CHAIN DRIVES

### IN ANOTHER PACIFIC COAST MILL

THESE illustrations show but a part of the Link-Belt equipment which speeds production in this modern mill (name upon request). Included in the installation are Link-Belt Anti-Friction Belt Conveyors, Automatic Tank Tripper, Chain Elevators and Conveyors, Transfer Tables, Flight Conveyors, Chain Drives, and numerous accessories.

Link-Belt builds a conveyor and a drive for every class of service, and, by reason of long contact with the industry, can offer valuable help in the selection of the right equipment for every job.



Picking table conveyor over chip-pers, composed of three strands of Link-Belt Promal H-480 Chain



Link-Belt >RIVETLESS< Chain Conveyor receiving blocks from flume and delivering to chipping plant



Link-Belt Anti-Friction Belt Conveyor and Link-Belt Automatic Tank Tripper distributing chips to storage bins

#### LINK-BELT COMPANY

Leading Manufacturers of  
Equipment for Handling Materials Mechanically and for the Positive Transmission of Power

INDIANAPOLIS	CHICAGO	PHILADELPHIA	TORONTO
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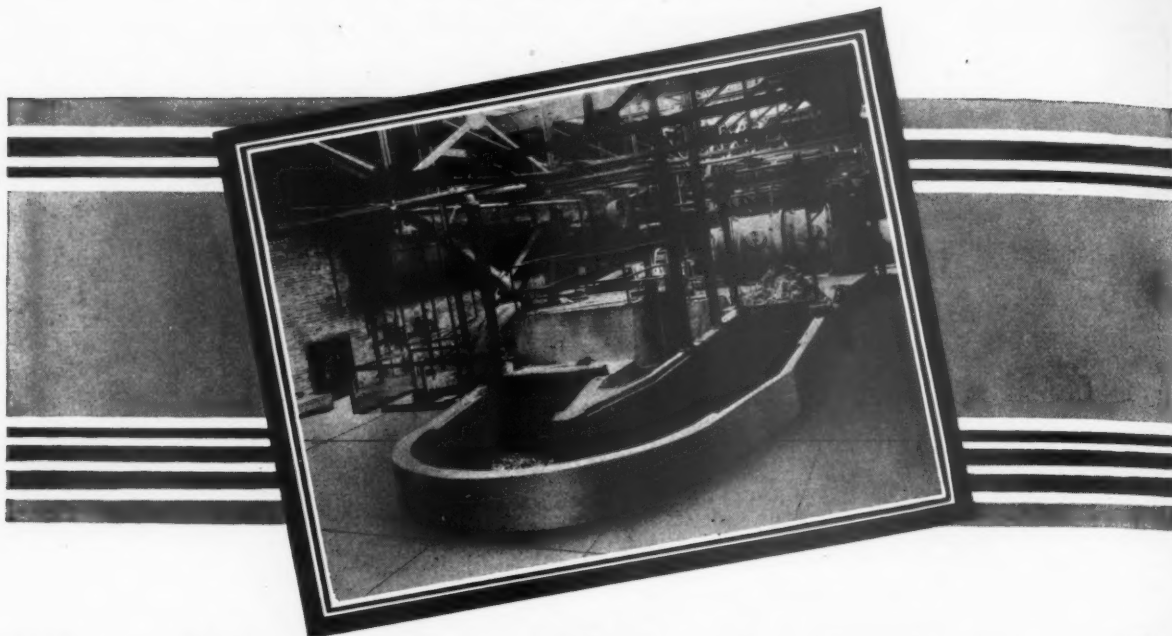
LINK-BELT COMPANY, PACIFIC DIVISION  
San Francisco, 400 Paul Ave. Los Angeles, 361 S. Anderson St. Seattle, 820 First Ave., S.  
Portland, Ore., 67 Front St. Oakland, 526 Third St.

4208

# LINK-BELT

When writing LINK-BELT COMPANY please mention PACIFIC PULP & PAPER INDUSTRY





## Turn Your Rag Waste Into Profit

**I**T IS absolute economic folly to discard the rag waste from continuous beating systems in board mills when a Marcy Rod Mill will convert it into valuable paper stock at a very low power cost per ton.

This waste is charged to the Marcy Rod Mill in a tangled mass of rags, rope, string, wire, shoes, rubber, wood and other refuse always found in unsorted papers. After pulping this mass in a Marcy Rod Mill separation is simple, while before it was impossible. The valuable pulp is carried off while the heavy "junk" settles out.

One 5' x 10' Marcy Rod Mill with 80 H.P. will

convert 4 tons of this rag waste material into high grade paper stock in 24 hours. It permits the paper manufacturer to utilize material which he now throws away and one of the easiest ways to make money is to utilize all of your waste products.

This additional production at such a low power cost will quickly pay for the installation of a Marcy Rod Mill. One of our engineers would be glad to visit your plant and show you how you can improve your product and reduce your manufacturing costs through the use of a Marcy Rod Mill. No obligation, of course.

*The* **MINE and SMELTER  
SUPPLY COMPANY**

**PAPER MILL DIVISION**

DENVER, COLORADO  
1422-17th Street

NEW YORK CITY  
225 Broadway

*Manufactured for us in Canada by*  
**WILLIAM HAMILTON, LIMITED**  
PETERBOROUGH, ONTARIO

# MASSCO

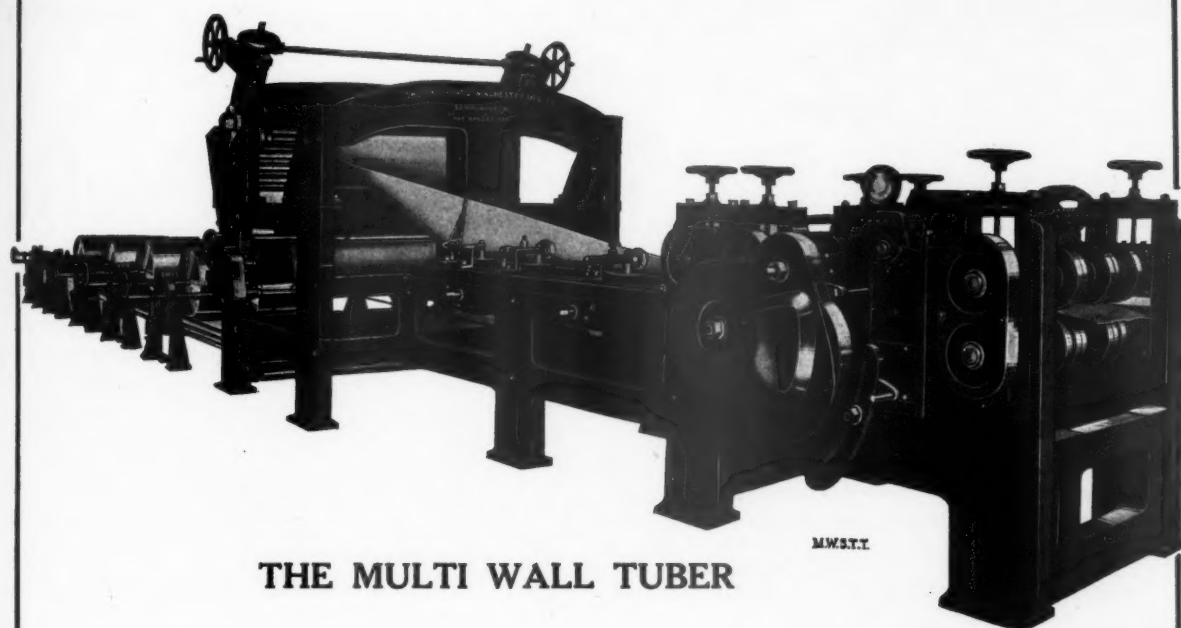
When writing to THE MINE & SMELTER SUPPLY CO., please mention PACIFIC PULP AND PAPER INDUSTRY



# PAPER BAG MACHINERY

## The Last Word - - -

in highest speed machine for making five wall bag tubes for sewed valve bottoms, used in the cement and allied trades. Completely equipped with anti-friction bearings.



THE MULTI WALL TUBER

—Established 1828—

**The Smith & Winchester Mfg. Co.**

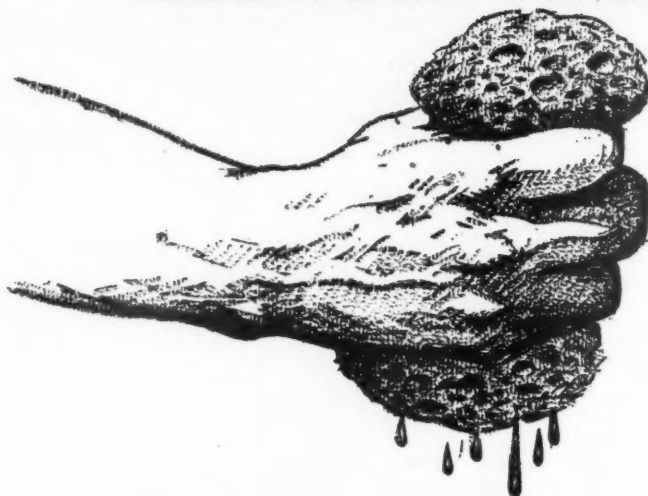
SOUTH WINDHAM, CONN.

DEPT. MFP.

# PAPER MILL MACHINERY

When writing to SMITH & WINCHESTER MFG. Co. please mention PACIFIC PULP AND PAPER INDUSTRY

# OPEN FOR UTMOST WATER REMOVAL - STRONG FOR LONGER LIFE ---KENWOOD TANNED FELTS



The new Kenwood Tanned Felts show a decided advance in felt performance. Whether it be fine felts making the highest grade paper or felts in the Board mill, the new Kenwood construction is equally desirable.

They are more open, their filtering qualities are improved and their openness is an advantage retained for a far longer period.

They are stronger. Their increased strength enables them to better withstand the day in and day out high production running schedules and adds materially to their length of service.

Kenwood pioneered the one-sided board

felt. The same research service developed and perfected the patented Kenwood Tanning Processes which protect the felt from the deteriorating effects

of acids. A third major development is found in the new method of yarn construction which, while adding nothing to the size or weight of the yarn, provides definite advantages both in strength and increased openness.

This progressive, scientific development of Kenwood Tanned

Felts assures a constant standard of quality and steady improvement in felt performance.

KENWOOD



WOOL  
PRODUCTS

## F. C. HUYCK & SONS

KENWOOD MILLS, ALBANY, N. Y.

KENWOOD MILLS LTD., ARNPRIOR, ONTARIO, CANADA

# KENWOOD MILLS

When writing F. C. HUYCK & SONS Co., please mention PACIFIC PULP AND PAPER INDUSTRY.



## The oil and grease you need

*...when and where  
you need it*

**W**E can't imagine a closer business association than that which Shell enjoys with its lumber industry customers. If they need a special product, even only a little of it and at some remote camp—out it comes exact,

suited to the purpose, inexpensive. Big orders or little, from new customers or old, it makes no difference, there is enough Shell service to go 'round; there are enough Shell products for all takers.

**SHELL MILL LUBRICANTS**



— ALBERTA LUMBER CO., VANCOUVER, B. C.  
When writing SHELL OIL CO., please mention PACIFIC PULP AND PAPER INDUSTRY

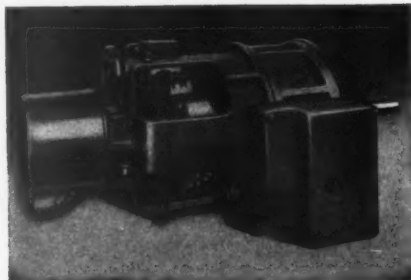
Have You Somewhat  
Do It  
[ The Sayings of



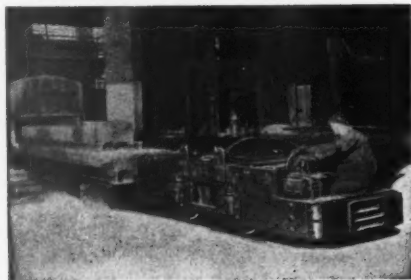
To Do To-morrow,  
To-day  
Poor Richard ]



Pump drives might well receive early consideration in your modernization program. Pumps, as a rule, run continuously, and any improvement in the power-factor and efficiency of the drives quickly results in appreciable savings. Modern synchronous motors, with their high efficiency, high power-factor, and adaptability for direct drive, are ideally suited for pump operation—in fact, for an ever increasing number and variety of machines.



The Type BTA motor—made exclusively by General Electric—may be just what you're looking for in your modernization plans. It is an a-c. adjustable-speed motor with such desirable d-c. features as (1) wide speed range, (2) shunt characteristics—practically no change in speed from no load to full load—and (3) high efficiency. It is finding wide applications for driving textile finishing machinery, cement and lime kilns, bakery machinery, stokers, boiler-house fans, oil-refining machinery, small paper machines, etc.—where d-c. advantages are desired without the necessity of investing in d-c. conversion apparatus.

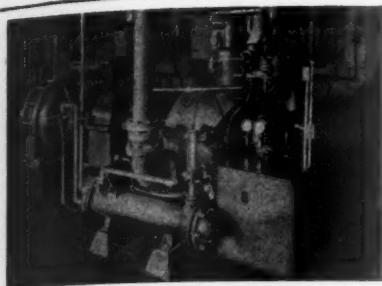


Have you checked up on your interplant haulage? There is a fertile field for modernization in the use of G-E electric industrial locomotives. First cost can be written off at a very low annual figure, and you can take a generous slice off your maintenance budget. These convenient, compact, electric workers are always ready to go at the turn of a handle; there are no standby losses; only one semiskilled operator is required; they are available in the storage-battery type, trolley type, or in a combination of both.

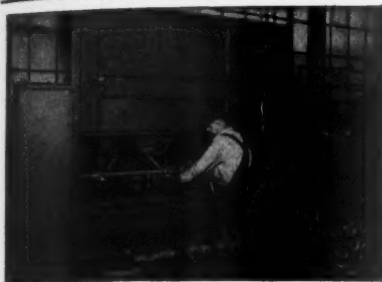


Control should receive foremost consideration in your modernization plans because of the greater productiveness, economy, convenience, and safety offered by modern controllers. Here is a textile mill, for example, that has modernized by installing the new G-E combination magnetic motor-starting switches which contain a hand-operated motor-circuit switch, a magnetic motor-starting switch, test jack, and fuses—all under one cover. This mill has gone a step further by installing G-E time-delay, push-button stations, which, according to operating records, are preventing 96 per cent of the shutdowns formerly caused by momentary voltage dips.

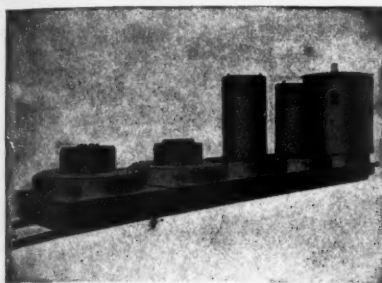




Manufacturers who operate continuous processes and use process steam will be interested in a new General Electric development that keeps the plant operating even though the outside power supply fails because of lightning or other disturbances. It is a dual-drive conversion and process-steam unit consisting of a synchronous motor and a d-c. generator operating under a balanced load condition with a mechanical-drive turbine. When power from the outside line is removed from the synchronous motor, an instantaneously operated automatic device switches the entire load to the turbine until outside service is resumed. The illustration shows such a unit in a paper mill located in a mountainous region.



Step No. 1 in modernizing the manufacture of most metal products is the redesign of those products to adapt them for arc-welded fabrication from standard shapes and plates. Step No. 2 is the purchase of hand-operated welding sets. Step No. 3 is the purchase of multiple-operator sets, i.e., sets from which a number of operators can work simultaneously. Step No. 4, perhaps, is the adoption of automatic arc welders for the rapid fabrication of standardized parts used in the assembly. In every step of this program, General Electric can help you with application-engineering advice, free sample work, free training of your operators in its welding school, and with a complete line of arc-welding equipment and electrodes.



Modernization economies mount up to big figures when G-E hood-type annealing furnaces, with controlled atmospheres, are installed for the "bright-annealing" of cold-rolled strip and wire. The brighter and more uniform anneals, the reduction in handling charges, the elimination of pickling and cleaning operations, and the greater speed and convenience resulting from the use of these furnaces effect economies in factory costs and selling costs that cannot be ignored by any progressive manufacturer.



When these two capacitors were installed in a mid-western flour mill upon the recommendation of a G-E salesman, the mill power-factor rose from 85 per cent to unity. The power contract granted a one-per-cent reduction of the total power bill for each per cent power-factor improvement above 85 per cent. The total power bill was reduced by 15 per cent—a saving of \$359 per month, or \$4308 per year. In addition, the electrical service was improved because of the better voltage regulation resulting. Whether you buy your power or generate it, capacitors offer exceptional opportunities for plant modernization.

### *Modernization Reduces Costs—Increases Profit*

There are any number of ways in which the G-E sales engineer can help you to modernize. Ask him about them when he calls; or write the nearest G-E office.







# WILLIAMS STANDARD PAPER MOISTURE TESTER

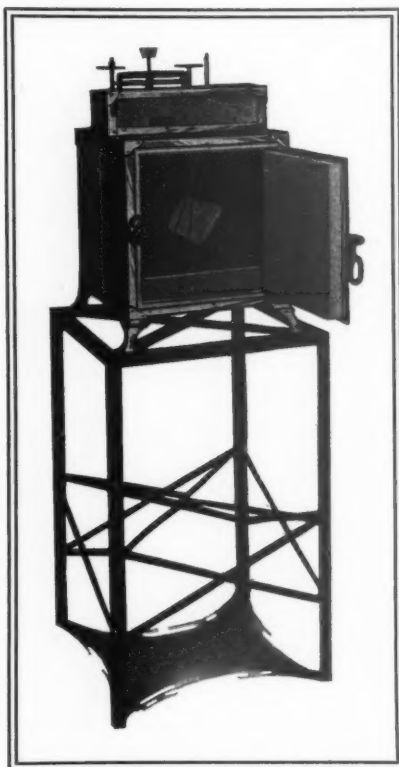
An Accurate Moisture Test of Your Paper in Ten Minutes

One Paper Company Has Bought 21 for Their Various Mills

*Moisture tests can be made in your Machine Room by your Machine Tenders.*

*No calculations required. Accurate to .1 of 1%.*

*Tests all kinds of paper from tissue to board.*



*Hot samples weighed without removal from oven. No chance for moisture absorption during weighing.*

*Double-walled electric drying oven, with thermostat control.*

*Accurate scales with non-rusting agate bearings and beam graduated to read percent moisture directly.*

*Over-dried Paper Costs You More Dollars Per Ton and Dissatisfied Customers*

**WILLIAMS APPARATUS COMPANY**  
WATERTOWN, N. Y.



When writing to WILLIAMS APPARATUS CO. please mention PACIFIC PULP AND PAPER INDUSTRY

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L. K. SMITH, Manager

LOYD E. THORPE, Editor  
HARLAN SCOTT, Advertising Manager

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AND DISTRIBUTORS OF PULP, PAPER, AND BOARD.**

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71 Columbia Street

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446 Morrison St.

SAN FRANCISCO  
369 Pine Street

LOS ANGELES  
257 South Spring St.

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Complete your picture now. Tear out this advertisement and mail it to us with your name and address. You will receive a sample copy of the only Western woodworking journal, together with a subscription offer.

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**NEW YORK**

# The Pacific Section of T·A·P·P·I Holds Its Spring Meeting

IT was a good meeting. At least when the sun sank down behind the rugged Olympics at the close of Sunday, April 19, every man-jack who had attended the Spring Meeting of the Pacific Section of TAPPI held at Everett, Washington, Saturday and Sunday, April 18 and 19, 1931, was very glad to have been there. When the books were balanced there was education, fellowship, entertainment and a surplus of fuller enjoyment of life to balance against such more mundane things as traveling expenses.

A few delegates trooped into the convention headquarters at the Monte Cristo hotel on the Friday night preceding, but the main gang didn't get in until Saturday morning, a fact perhaps best accounted for by the accessibility of Everett for motor travel from all points up and down the Pacific Coast. Nature bestowed its own blessing on the meeting by providing perfect weather for both Saturday and Sunday, particularly the latter.

The two-day session resolved itself into several major divisions. These included the presentation of technical papers, a business meeting, visits to the mills of the Everett Pulp & Paper Company and the Puget Sound Pulp & Timber Company, the stag banquet and the Sunday rest and recreation features. Analyzing the meeting in retrospect there is much to commend it in the matter of balance.

## Big Schedule

It is probable that when Chairman C. W. Morden sent out his call for potential papers to be presented at the Spring meeting that he did not anticipate such a hearty response. In any event, when the program was finally shaped up the papers were divided under two major subject heads and presented under two sections which were held concurrently. This was done to accommodate the large number of papers.

The "Paper Section" convened in the banquet hall and was presided over by C. W. Morden, Portland, Morden Machines Co. Brian L. Shera of the Wallace & Tiernan Co., presented an instructive paper on a subject which has come in for considerable study in very recent years by paper makers. The title of his paper was, "Controlling Paper Mill Wastes with Chlorine and Ammonia".

In conclusion Mr. Shera said, "Slime has been found to be the cause of waste in pulp and paper mills. It is detrimental to machine operations, to felt life, and quality and quantity production. As accounting systems in paper mills improve we get a better and closer check on the origin of costs, and a surprising amount may be charged to slime."

"By means of accurately controlled dosages of chlorine or chloramines, the costly effects and waste occasioned by slime in pulp and paper mills, can be restricted or entirely eliminated."

Mr. Shera illustrated his paper by displaying samples of slime growth and microphotographs of growth on fibres.

R. J. Schadt of the Hawley Pulp & Paper Company, Oregon City, Oregon, in his paper on "White Water Utilization", presented an extension of the work he has been doing on that subject as a member of the national committee.

Dr. E. Richter, a thoro chemist with experience in the pulp and paper industry on the North American continent and in Germany, presented a paper on "Western Cellulose". Dr. Richter said that in dozens of comparisons "that European and Eastern pulp and cellulose are in no way superior to our Western products, provided the latter are manufactured with due consideration of the peculiar qualities of the wood and the processes applied. With good cooperation the West is prepared to meet any competition as to various and reasonable requirements."

## Press Rolls

In the absence of G. Elmer Emigh, superintendent of the St. Helens Pulp & Paper Company, St. Helens, Oregon, the paper on "Proper Care of Rubber Covered Press Rolls" was presented by U. A. Keppinger of the Griffith Rubber Mills, Portland.

The Pulp Section convened in the Rose Room and drew a somewhat larger attendance than the paper section. In the absence of R. S. Wertheimer, ex-chairman of the Pacific Section, Longview Fibre Company, Longview, Washington, James P. V. Fagan of the Puget Sound Pulp & Timber Company, Everett, presided.

Sigurd Norman, of the Sumner Iron Works, presented a brief discussion of some experimental work that has been conducted at the Sumner works on chipper speeds. He stated that they had purposely gone into the field of high speeds and had found that excellent results both from the standpoint of better chips and better total pulp yield in relation to raw wood could be obtained.

## Pulp Section

C. R. P. Cash of the St. Regis Kraft Co., Tacoma, gave a paper entitled "Some Remarks on Counter Current Washing of Pulp", which is a subject he has been studying for some time.

N. W. Coster's paper on bleachability determination is presented in full in another part of this issue.

Ralph Reid of the St. Helens Pulp & Paper Company, St. Helens, Oregon, in his paper on "Lime Recovery" told of some experience in the subject at the St. Helens kraft mill.

In presenting his paper on "Hot Acid Recovery in Sulphite Manufacture," H. Lundberg of the G. D. Jenssen Company, Seattle, touched on the origin and

# SPRING MEETING Pacific Section of T.A.P.P.I

APRIL 18 and 19, 1931

MONTE CRISTO HOTEL, EVERETT, WASHINGTON

## PAPER SECTION

SATURDAY

Banquet Hall

C. W. MORDEN, *Presiding*

9:00 A.M.—Call to Order and Reading of Following Papers:

"White Water Utilization"

R. J. SCHADT,

*Hawley Pulp and Paper Co.*

9:30 A.M.—"Controlling Paper Mill Wastes with Chlorine and Ammonia"

BRIAN L. SHERA,

*Wallace and Tiernan Co.*

10:00 A.M.—"Western Cellulose"

D. E. RICHTER, *Seattle*

10:30 A.M.—"Proper Care of Rubber Covered Press Rolls"

G. ELMER EMIGH,

*St. Helens Pulp and Paper Co.*

11:00 A.M.—"Wood Waste As a Fuel in Pulp and Paper Plants"

H. W. BEECHER,

*C. C. Moore & Co., Seattle*

12:00 M. —Buffet Lunch—Rose Room.

## PULP SECTION

SATURDAY

Rose Room

J. P. V. FAGAN, *Presiding*

9:00 A.M.—Call to Order and Reading of Following Papers:

"Proper Speed of Chippers"

S. NORMAN,

*Sumner Iron Works*

9:20 A.M.—"New Raw Materials"\*

DR. LEO FRIEDMAN,

*Eugene, Ore.*

9:40 A.M.—"Some Remarks on the Counter Current Washing of Pulp"

C. R. P. CASH,

*St. Regis Kraft Co.*

10:00 A.M.—"Bleachability Determinations of Sulphite Pulp"

N. W. COSTER,

*Puget Sound Pulp & Timber Co.*

\*Speaker absent and paper not presented.

10:20 A.M.—"Lime Recovery"

RALPH REID,

*St. Helens Pulp and Paper Co.*

10:40 A.M.—"Hot Acid Recovery in Sulphite Manufacture"

H. LUNDBERG,

*G. D. Jenssen Co., Seattle*

11:00 A.M.—"Red Liquor Disposal"\*

DR. A. W. NIGHTINGALE,

*Seattle*

11:30 A.M.—"Three Phase Bleaching As Applied to Western Wood"

R. B. WOLF,

*Weyerhaeuser Tbr. Co., Longview*

12:00 M. —Buffet Lunch—Rose Room.

## COMBINED MEETING

SATURDAY

Banquet Hall 12:45 Sharp

C. W. MORDEN, *Presiding*

Greeting by MAYOR N. D. MARTIN

Introduction of Dr. C. E. Curran of U. S. Forest Products Laboratory, presenting:

"A Review of Current Research at the U. S. Forest Products Laboratory."

Illustrated talk by RAY SMYTHE of Willamette Iron and Steel Works, Portland, covering

"Changes in Equipment Design and Application in the Pulp and Paper Industry."

MILL VISITS

SATURDAY

2:30 P.M.—Everett Pulp and Paper Co.

4:15 P.M.—Puget Sound Pulp and Timber Co.

"STAG" BANQUET

Banquet Hall, 6:30 P.M.

SUNDAY, APRIL 19

—TRIP TO BIG FOUR INN—

*Courtesy Puget Sound Pulp and Timber Co.*

Leave Hotel 9:30 A.M., Return 5 P.M.

*Picnic Lunch at Big Four, courtesy of Everett Pulp & Paper Co.*

GOLF

Courtesy of the course will be extended by the Everett Golf and Country Club to those desiring to play on Sunday.



development of the Chemipulp process and told what operating economies have been achieved in some actual installations.

R. B. Wolf, one of the originals in the TAPPI national organization, and now a Pacific Coast man by reason of his recent affiliation with the Weyerhaeuser Timber Company as manager of their 150-ton bleached pulp plant at Longview, Washington, now under construction, discussed "Three Phase Bleaching as Applied to Western Wood."

Two of the "Pulp Section" papers had to be omitted due to the absence of the speakers. Dr. Leo Friedman, of the University of Oregon, who has been doing some yeoman work in research, was unable to present his scheduled paper on "Raw Materials." At the last minute Dr. H. W. Nightingale, Washington State Sanitary Engineer, who is widely known as an authority on stream pollution and its effects on marine and aquatic life, was detained by some important studies he is now carrying on and was therefore unable to talk on "Red Liquor Disposal," a subject which he was to discuss extemporaneously.

The Pulp Section finished its schedule of papers a bit early and adjourned to the banquet room to listen to H. W. Beecher's paper on "Wood Waste as a Fuel in Pulp and Paper Plants." That paper is presented elsewhere in this issue.

#### Laboratory

The buffet lunch in the Rose Room was a most successful affair and provided an enjoyable opportunity for those present to mix around and get acquainted. It is probable that a similar feature will be adopted as a permanent feature in future programs.

Following the buffet lunch everyone went down to the banquet hall to hear Dr. C. E. Curran give "A Review of Current Research at the U. S. Forest Products Laboratory." Dr. Curran is in charge of the pulp and paper section at the laboratory. He stressed the point that the laboratory is a national institution and is impartial in its study of the problems of different sections of the country. A fundamental object of the present trip, in addition to attending the TAPPI meeting, was to view at first hand some of the research problems of the Coast so that the laboratory might more effectively outline its program.

Dr. Curran briefly described the nine sections of the laboratory and then described in some detail the functioning of the pulp and paper section. "Despite the developments in pulping other materials," Dr. Curran said, "I am still convinced that wood will no doubt for a long time continue to be the principal source of fibre for paper making."

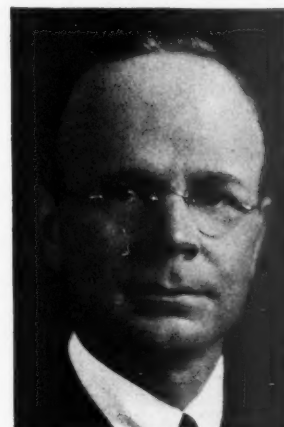
He gave some examples of current research problems that are being carried out, such as the division of the fibre to discover the molecular structure by employing progressive chemistry. Such research, he said, had led to the development of the semi-chemical pulping process which has already developed into a commercial production of 200 tons daily.

#### Business Session

Somewhat of an apology was offered with reference to Douglas Fir. Dr. Curran pointed out that whereas the major portion of the laboratory program devoted to Western woods had been concentrated upon Douglas Fir, he felt from his present contacts with the Pacific Coast industry that Western Hemlock offered a somewhat more fruitful field for study which could be undertaken for the more immediate benefit of the Coast mills.

Ray Smythe, manager of the Willamette Iron Works, Portland, concluded the afternoon session by presenting illustrated slides outlining some recent "Changes in Equipment Design and Application in the Pulp and Paper Industry." In this address he illustrated a surprisingly large number of machines and devices that had been developed on the Pacific Coast to meet specific problems of the Western mills.

At the brief after-lunch business session the articles of organization proposed for the section were read as approved by the parent organization and adopted as read. The question of open meetings again came up. While it had been the original intention to have the Everett meeting closed except to members, it was felt that this point was not thoroughly understood by the industry. Therefore, rather than keep anyone away, the Everett meeting was open to all interested. A motion



C. W. MORDEN

Chairman  
Pacific Section  
T.A.P.P.I.

was made and adopted to open the meetings hereafter to all personnel of host mills.

A motion was made to designate the Fall meeting hereafter as the annual meeting.

The chairman announced that the Fall meeting for 1931 would be held at Powell River, B. C., with the Powell River Company Ltd. as host.

A motion of appreciation to the Everett Pulp & Paper Company and the Puget Sound Pulp & Timber Company was made and carried.

Appointments of Pacific Section men to national committees were read as follows:

#### Committees

Educational Committee—Myron W. Black, Inland Empire Paper Company, Millwood, Washington.

Management Methods Committee—R. B. Wolf, Weyerhaeuser Timber Company, Longview, Washington.

Patents Committee—T. J. Geissler, 302 Platt Building, Portland, Oregon.

Waste Committee—R. J. Schadt, Hawley Pulp & Paper Company, Oregon City, Oregon.

Heat and Power Committee—H. W. Beecher, C. C. Moore & Company, Seattle.

Materials of Construction Committee—S. Gjeisbeck, Arctic Building, Seattle, Washington.

Fibrous Raw Materials Committee—W. F. Goldsmith, Hawaiian Cane Products Company, San Francisco, California.

Paper Testing Committee—V. P. Thorpe, Powell River Company Ltd., Powell River, B. C.

Pulp Testing Committee—H. K. Benson, University of Washington, Seattle, Washington.

Preparation of Fibrous Raw Materials Committee—

N. W. Coster, Puget Sound Pulp & Timber Company, Everett, Washington.

Mechanical Pulping Committee—E. P. Ketchum, Powell River Company, Ltd., Powell River, B. C.

Alkaline Pulping Committee—Ralph Reid, St. Helens Pulp and Paper Company, St. Helens, Oregon.

Acid Pulping Committee—E. A. Weber, Oregon Pulp & Paper Company, Salem, Oregon.

Paper Manufacture—B. T. McBain, 505 N. E. 19th St., Portland, Oregon.

In a letter from National Secretary R. G. Macdonald announcing the appointments he said that a special effort had been made to have no more than one Pacific Section representative on any committee so that such representative might act as a local committee chairman and in turn organize a Section Committee which can serve the special needs of the Pacific Section and provide for cooperation with the national committee.

#### Mill Visits

The latter part of the afternoon was given over to visits to local mills. Transportation was provided for all. Attention was first directed to the 75-ton book paper mill of the Everett Pulp & Paper Company, which, incidentally, is an institution of about forty years standing, and truly one of the pioneers of the paper industry on the Coast and one of the most outstandingly successful today. Manager William Pilz was on hand to greet each of the visitors and to organize and start off the "touring parties." These parties were in charge of A. H. B. Jordan, vice president and superintendent, Frank Killien, and other executives and mill department heads.

Upon concluding the visit to the Everett mill the visitors were conducted thru the new 175-ton sulphite mill of the Puget Sound Pulp & Timber Company.

When evening came the banquet hall filled up at the appointed hour with the approximately 150 men who were in attendance at the meeting. The room hummed with conversation as friends met old friends and renewed fellowship and made acquaintances. There wasn't a long face within forty miles and everybody seemed to be having the best kind of a time.

#### Banquet

Chairman C. W. Morden arose somewhere between the soup and the pie and gave an announcement. It is believed that he expressed appreciation to the Everett Pulp & Paper Company and the Puget Sound Pulp & Timber Company for the courtesies that these two companies had extended as hosts, and it is also believed that he made some other announcements also, but the din was such that altho he shouted himself hoarse he was scarcely heard.

Those seated at the speaker's table were: A. H. B. Jordan, Wm. Pilz, and Dan Duggan, Everett Pulp & Paper Company; C. E. Ridgeway, Puget Sound Pulp & Timber Company; Dr. C. E. Curran, U. S. Forest Products Laboratory; Ray Smythe, Willamette Iron & Steel Works; and C. W. Morden, chairman. Dan Duggan, with all his eloquence, was toastmaster.

Entertainment features were provided by some excellent local talent, including the little barefoot dancing girl with a wisp of rayon or something by way of costume, four young tap dancing lads who could move their feet with rhythm, a young accordion puncher, songs by two of the orchestra men, and a thunderous rendition of "Davy Jones", a deep sea song by C. B. Everitt of the Puget Sound Pulp & Timber Company.

The post-eating period of the banquet was given over to impressing speakers to the floor by King Dan

### ARTICLES OF ORGANIZATION FOR PACIFIC SECTION OF THE TECHNICAL ASSOCIATION OF THE PULP AND PAPER INDUSTRY

#### Article I Name

The section shall be known as the Pacific Section of the Technical Association of the Pulp and Paper Industry, hereinafter referred to as the section.

#### Article II Membership

Membership in the section shall consist of members and affiliated members.

1. A member of the section shall be an active, associate, or junior member of TAPPI.

2. An affiliated member shall be any person interested in pulp and paper manufacture or in industries of institutions related thereto but who is not a member of TAPPI.

3. Application for membership in the section shall be passed upon by the executive committees of the section.

4. Members and affiliated members shall be entitled to vote but only members may hold office. Otherwise the privileges shall be the same for both classes of members.

#### Article III Dues

The annual dues for this section shall be \$3.00 per year for each affiliated member, payable in advance. There shall be no section dues for members.

Payment of Dues: Annual dues shall be payable in advance and shall become due on the first of January of each year at which time a bill therefor shall be mailed to each member, except that members elected after the thirtieth of June shall be liable for one-half of the annual dues for the year.

#### Article IV Officers

There shall be a chairman, vice chairman, and secretary-treasurer of the section whose duties shall be the customary ones for each office.

#### Article V Executive Committee

The executive committee shall consist of the officers of the section.

#### Article VI Election

The election of officers shall take place yearly at the annual meeting of the section. Vacancies occurring during the year shall be filled by the executive committee until the next annual election.

#### Article VII Meetings

The executive committee shall designate a date for the annual meeting for the election of officers and the transaction of other business.

#### Article VIII Committees

The executive committee shall appoint special committees as they see the need. These shall not become permanent committees unless voted on by the section as a whole.

#### Article IX

The articles of organization of the section shall be approved by the Executive Committee of the Technical Association of the Pulp and Paper Industry.

Duggan, some response to which we can't quite print. There were no speeches, unless the toastmaster's introductions might classify.

Sunday dawned beautiful and clear. Many delegates remained over until Sunday to devote a day to recreation. These divided into two fairly equal groups, the one of which played around on Everett's golf course, the other went up to Big 4 Inn in the Monte Cristo country on the scenic 33-mile railway. Transportation was furnished by courtesy of the Puget Sound Pulp & Timber Company, and a buffet lunch was served at the Inn by the courtesy of the Everett Pulp & Paper Company.

It was a good meeting.

C. W. Morden is due a lot of credit for engineering the Everett meeting and pulling things off on schedule so well. Being chairman is a load on the shoulders. Incidentally, much interest was expressed in Mr. Morden's new type machine seen by the visitors in the Everett Pulp & Paper Company's mill.

C. E. Braun, who is now making his home in Vancouver, Washington, also gets lots of credit for his active part in shaping up the Everett program.

Ralph Shaffer, president of the Shaffer Box Company, contributed a serious thought to the meeting when, following the banquet, he made a plea for more thoro cooperation in the industry, within organizations and between different organizations. He pointed out the manifold problems of the industry in times such as the present and urged a deep study by everyone whose livelihood was identified with the business.

James P. V. Fagan, who sees about making pulp out at the Everett mill of the Puget Sound Pulp & Timber Company, presents an unsolved mystery for future TAPPI meetings to take up, namely and to-wit: "How many cigars does Fagan smoke in a day and where does he throw the butts?"

Ray Smythe, of the Willamette Iron & Steel Works, was threatened repeatedly with an application of the razor, but at last reports was still seen with the unmentionable whiskers for which he is by now well known up and down the Coast, in China, Timbuctoo, Salt Lake City, and the Smith Brothers cough drop factory.

Below are quoted, as full as the postal regulations will permit, a condensed version of several stories told at the banquet,

Pitcock Leadbetter was up from Portland and Salem.

Dan Dupuis, who carries one of the best known paper making names on the Pacific Coast, was among

those present at Everett. He came up with Ray Schadt. These two, between them, have much to do with production at the Hawley Pulp & Paper Company at Oregon City, Oregon.

W. W. Griffith, resident manager of the St. Regis Kraft Company, again brought along a big delegation from the Tacoma mill. The latest census reports on this expeditionary force included Dennis Cousins, L. R. Wood, E. P. Wood, "Canadian Pacific" Cash, D. E. Cook, H. B. Reilly, Nels Rosenblew, and-if-we-missed-any-let-us-know.

A. D. "Dad" Wood, one of the best loved figures in the pulp and paper industry on this Coast or anywhere else, was among those present, the pulp department of the Shaffer Box Company, where "Dad" holds sway now being at that point of efficiency where it runs by itself. And you ought to see the pulp they are making.

R. V. Bingham, who designs pumps for this and that service in pulp mills in his Portland, Oregon, factory was present, as was also his right hand man, M. L. Edwards. Heard somewhere that Bingham will have a lot of pumps in the new Weyerhaeuser mill.

#### Shelton Will Keep Rainier Mill

The Rainier Pulp & Paper Company will not move its 175-ton bleached sulphite mill from Shelton, Washington, as it once threatened to do. Instead, it will at once effect some improvements and resume production which will preserve the factory payroll to Shelton and the \$35,000 in annual taxes to Mason county. Credit for retaining the mill rests squarely with the citizens of Shelton, who, by united effort, subscribed a fund of \$166,000 to adjust the controversy existing between the pulp mill and the oyster growers of the Shelton waters.

Quite some time ago it was charged that the sulphite liquor discharges from the pulp mill were injuring the oyster industry of Oakland Bay and vicinity. There has at no time been unanimous agreement on the part of the pulp mill, oyster men, state health authorities, fish and game commissioners, and others involved what, if any, damage was being done by the pulp mill to the oysters. However, suits were filed against the pulp mill and these claims eventually involved damages amounting to more than \$1,500,000.

Faced with this serious situation the pulp mill organization announced that if the matter could not be adjusted it would have to dismantle the mill and move it to some other location. As the mill and its allied lumber mills constitute almost the entire industrial hub around which the Shelton community revolves, the citizens held a mass meeting. Out of this and subsequent meetings an emergency committee was formed and an agreement worked out whereby, if the citizens of Shelton would liquidate the oyster claims, the pulp mill would not only remain, but would improve the mill and end the dumping of waste liquors in the bay.

Raising \$166,000—the agreed sum necessary to get peace with the oyster growers—is quite a sum in these days, but Shelton did it, and the pulp mill will stay with its payroll.

The Rainier mill will build a pipe line to pump its sulphite wastes into a series of dry lakes near Shelton where solar evaporation will largely be depended upon to get rid of the controversial liquors. The mill will resume production on high grade bleached sulphite papers, but will be subsequently converted for the exclusive manufacture of rayon grade pulp.

## T-A-P-P-I

Pacific Coast Section

Chairman—C. W. MORDEN,  
C. W. Morden Co., Portland, Oregon

Vice-Chairman—HARRY ANDREWS,  
Powell River Co., Ltd., Powell River, B. C.

Secretary-Treasurer—MYRON W. BLACK,  
Inland Empire Paper Co., Millwood, Wash.





The new finishing room and warehouse built for the Inland Empire Paper Company, Millwood, Washington

### Inland Empire's New Buildings

Altho they are spending quite a few dollars over there at Millwood, Washington where the Inland Empire Paper Company rustles out some 110 tons of news and poster paper daily under the resident managership of Waldo Rosebush, the present improvement program does not classify with the "biggest of the big" developments which the Coast has known in the past six years.

There is, however, in the Inland Empire Paper Company's methods something of wisdom that can be put in the book in these days when jobs and applicants therefor, production and actual sales, are not in balance.

There are five major phases of the work now nearing conclusion. These include the building of a new storage and shipping room; rebuilding of the grinder room; reconstruction of the wood room; additions to the power substation; and construction of new chests in what used to be part of the beater room.

The new warehouse is now complete. It is 140 feet wide and 440 feet long, affording ample storage space for some time to come, including any additions to machine capacity if made later on.

In the grinder room the work is done. Here the machines have been arranged for greater efficiency. The wood room is now the main center of activity, undergoing a thoro modernization.

Changes in the power substation include some new transformers, new high tension switching equipment, etc. The greater part of this work will be completed within three or four months, but after that there will be many minor jobs which will last for several months to come, changes in piping, water mains, etc.

Now, how is the Inland Empire Paper Company carrying out this work? Investigation of this company's personnel record would reveal an unusually stable force. This very desirable stability factor is due to the company's earnest interest in the welfare of its employees, not surface interest, but "long-pull" interest which manifests itself in best form in times like these.

In the Inland improvement program one does not find an outside crew mustered in to railroad the job thru with no other consideration. Such a policy would defeat the fundamental purpose of carrying out an improvement program at this time when business is slow—at least most everyone tells us it is.

Here at Inland the mill crew is doing the greater part of the job. The new warehouse was built on contract by the Austin Company, but all of the electrical work, piping, machine changes, etc., has been done and is being done by the company's own regular employees.

It might be said that the old order of things has been reversed to a large degree. The job, yes, that is to be done, but it is not the only consideration. In fact, in times like these, it is a secondary consideration. The Inland Empire Company is practicing what so many are only preaching, "The First Duty of Industry Is to It's Employees."

### International Forfeits Colorado Timber Option

The International Paper Company, high bidder for the timber in the San Juan and Rio Grande National forests in Colorado, has forfeited its option to the two tracts and thereby throws the timber back on the market. Bidding against competitors the International last August offered the government approximately five and a half million dollars for the estimated two million cords in the two reserves. A check for \$75,000 was posted with the Forestry Service as evidence of good faith.

The terms of the award allowed the International Company until April 1 to make all necessary surveys and to report on plans to cut the timber. Since then officials of the company have visited the scene, studied all facilities, looked over possible mill sites and gave Coloradans the hope that one or more mills would be established in the state. These visits led to comment as to the possible location of the mill. Several southern Colorado cities got busy and attempted to show the advantage of building in their midst.

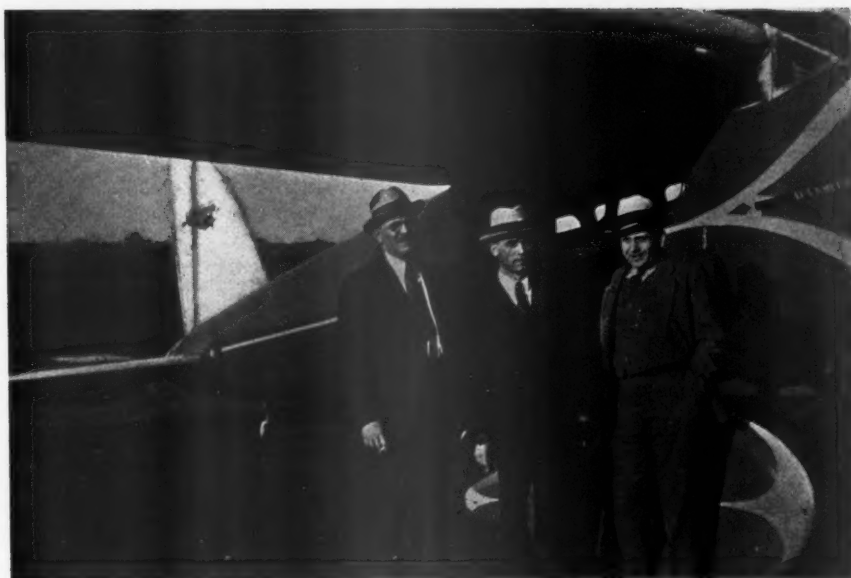
Meanwhile the International Company gave out little or no information and by no stretch of the imagination can be accused of giving undue encouragement to any of the towns.

The announcement that the company had decided not to carry out the contract fell like a bombshell on the boosters who had been waiting rather impatiently the expected announcement of the location of a mill. Such announcement was looked for on the first of April but was not made by the Regional Forester in Denver until the second.

As the situation now stands the government will hold the timber until some purchaser offers \$5,500,000 for it, this value having been determined upon as a result of the bidding. Coloradans are pinning their hopes on the Combined Locks Company of Appleton, Wisconsin, the second highest bidder last summer. This company it was that first determined the value of the Colorado timber for paper making purposes. After experiments extending over several months officials of this firm induced the government to offer the two tracts for sale.



Here under the wing of the fast plane which brought W. H. Lee from Lockport, N. Y., to the Pacific Coast is (left) Alan Dunham, Pacific Coast representative for Lockport felts, (center) J. A. Quinn, purchasing agent and (right) L. Mullins, superintendent, of the Fibreboard Products, Inc., mill at Stockton, California.



#### Lockport Executive Flies To Save Time

Here we have in this little yarn some practical advice and concrete evidence—not empty theories—on how the present day executive can save time. It's a story that's up in the air.

When William H. Lee, who is treasurer and general manager of the Lockport Felt Company of Newfane, N. Y., decided that he ought to go out to the Pacific Coast and see how his representative in that region, Alan Dunham of Portland, Oregon, was doing in the matter of selling Lockport felts to the pulp and paper mills of the Far West, the problem of time loomed large as an obstacle to the trip.

But, Mr. Lee being an aviation enthusiast and possessed of a readiness to adopt the modern in transportation as well as in felt manufacture, saw a way out of the problem. He had made a number of airplane trips to paper mills in the Eastern and Midwest states and had found that such trips could be made on somewhat of a commuting basis from the adjoining flying field at Lockport.

Some time ago Mr. Lee accepted delivery on a new 6-passenger Lockheed-Vega plane of the same type that Captain Frank Hawks had busted all records with in hopping across from one side of the other of these United States of ours. On delivery, that plane had skimmed from Los Angeles to Chicago—quite some distance as you'll see on the map—in just about ten hours even.

On February 24, Mr. Lee, with Mrs. Lee and his young son Raymond, got into the Lockheed-Vega at Lockport with Allan Van De Mark at the controls and in 15 hours and 45 minutes of flying time they stepped out on the flying field at Los Angeles, 2,500 miles away. They saved quite a bit of time in that hop.

After making several calls in the Los Angeles vicinity they hopped up to Oakland—about 400 miles—in 2 hours and 10 minutes. Here they visited some of the Fiberboard Products Inc. mills in the vicinity, called in at the San Francisco Headquarters of the Crown Zellerbach Corporation, and got a lot of business done, including a few sample flights in which some of the Pacific Coast paper mill people were treated to a free airplane ride. They hopped from Oakland to the Fibreboard mill at Stockton in 21 minutes.

From Stockton to Portland took just 4 hours and 10 minutes. There they left the plane at the Swan Island airport while they called at mills in the vicinity, making about ten calls with the aid of Alan Dunham's automobile. Up north they visited offices in Seattle, went over to Port Angeles.

Going back the Lee party flew up the Columbia River, East by way of Pocatello, Idaho and no time at all but what they were home. The round trip, from Lockport to Lockport, encompassed some 7,000 miles and was accomplished in a total time that would have taken two solid weeks for the Pacific Coast travel alone.

The Lockheed-Vega plane used has a maximum speed of 210 miles per hour. Allan Van De Mark, who hurries the plane around for Mr. Lee, is a pilot with about five years of transport experience, and he talks about 1,000's of miles like we talk of doing nine holes of golf.

As for the trip Mr. Lee said he was impressed with the fine reception he received everywhere on the Coast in the paper industry. The trip gave him the opportunity, as a chief executive in an allied industry, to meet the chief executives and operating men in the paper industry on the Coast, an advantage which he would have had to forego because of lack of time had he been forced to rely on ordinary rail transportation.

Mr. Lee commented favorably on the development of the pulp and paper industry of the Pacific Coast, saying that the newer mills were equal to or better than any in the country. He was agreeably impressed with the development the industry has shown in the past few years.

As for flying, Mr. Lee is entirely sold on the idea, particularly for the executives whose time is valuable.

#### Saugerties Company Adds West Coast Unit

The tissue Company of Saugerties, N. Y., has leased a portion of the big new converting plant of the Crown Willamette Paper Company at Camas, Washington and is equipping the space with machinery to make paper napkins and specialty paper products. Paper will be purchased from the Crown Willamette mill. The new unit will be in production about June 1.

# Wood Waste As a Fuel

## In Pulp and Paper Plants

By H. W. BEECHER

Northwest Manager, C. C. Moore Co., Seattle

In the following the author has attempted to show briefly: first—the desirability of changing the purchase of wood waste from the present “cubic foot basis”, to a “dry weight” basis; second—the limits of air preheating and the desirability of heating the maximum possible percentage of the air that enters into the make-up of boiler exit gases; and third—a method of checking boiler performance with “Hog Fuel” or wood waste and establishing a standard to which plant operators can work.

These three subjects are of special interest respectively to the plant manager, the plant designer and the plant operator. They should all be factors in the establishment of low ultimate fuel cost and economical operation.

### Fuel Measurement

Custom, dating back to the days when Hog Fuel had little commercial value, has decreed that Hog Fuel shall be sold by units of volumetric measurement; and now—when we knew that its sale should be by units of “weight of dry fuel”, it is going to be difficult to convince either—first—the buyer as to the advantage in making a change in method of buying that may add complications compared to existing contracts of purchase and sale, or—second—the seller who now has a simple unit of which he retains control and with which he has obtained an attractive revenue for what was once a source of considerable expense.

It should not be necessary to more than state the facts to the average buyer. The purchaser should know how many B. T. U. he is obtaining for his dollar. Without this information, how can he compare the Hog Fuel from one source with that from another? How can he tell whether he should use kiln dried or wet refuse—hemlock or fir? What premium should he pay for one fuel over another per unit of volume? How can he run a complete boiler test and effect a heat balance?

The variations in the amount of steam that can be generated in the same furnace and with the same equipment per unit of 200 cubic feet of fuel is surprising.

Suppose we compare the refuse from a fir mill in which the hog knives are sharp and there is a large percentage of sawdust and fine hog, with a small percentage of bark dropped into a 40' car fitted with 10' high box which is hauled five miles and then measured—with the refuse from a fir mill in which the sawmill uses most of the sawdust in its own steam production and sells straight hog fuel with a large percentage of bark and loaded in a low sided car for short transportation of, we'll say, less than a mile. Each of the above described fuels to be 45% moisture and 55% dry fuel. The first fuel may weigh as much as 4,900 lbs. per unit of 200 cu. ft. or 24.5 lbs. per cubic foot. The second fuel may weigh less than 3,800 lbs. per unit or 19 lbs. per cubic foot. It's largely a question of the voids in the measuring container at the time of measurement. The first fuel would contain 2,700 lbs. of dry fuel or at 8,800 B. T. U. per lb., 23,700,000 B. T. U. and at a boiler and furnace efficiency of 55%, would evaporate 13,400 lbs.

water from and at 212° per unit. The second fuel would contain but 2,150 lbs. of dry fuel which, at 8,800 B. T. U. per lb., would contain 18,900,000 B. T. U. per unit, and at the same efficiency of combustion and heat absorption, would only evaporate 10,400 lbs. from and at 212° per unit.

Unless the buyer checks on how much dry fuel he is getting per unit, he cannot tell from what source he should make his purchase.

Still greater necessity for weight determination arises when the comparison also involves variation in moisture content, as moisture in the fuel affects the availability of the B. T. U. content.

Planning mill shavings are sometimes erroneously sought as fuel because they make a hot fire, are readily handled in conveyors, and are low in moisture. If bought on a unit basis, the low weight per cubic foot more than offsets the advantages of low moisture content, and unless they can be purchased at considerably less price per unit, they are not a comparable fuel.

To convince the mill owners that they should sell on a dry weight basis is no easy task—they will not welcome any change and will be suspicious of the motives prompting its advocacy. Yet in the end, the dry weight basis is the only logical method to employ. If one mill is able to give you more heat units in a car load of fuel than his neighbor, he should be paid accordingly and the mill owner with the shavings should not get as much for his carload because it contains less B. T. U. and will make less steam.

A somewhat similar situation exists with the buying of pulp wood, altho the variation is less than with Hog Fuel. What the mill wants is, in this case, cubic feet of actual wood. If you are buying it by the cord, the contents of a cord will vary with the piling for measurement because of variation in the voids, and you may get more or less than what you pay for. If you are buying by mill scale again this does not correspond to cubic footage and the over-run is variable dependent on the size of the wood.

It is going to take concentrated effort on the part of the Hog Fuel purchasers to introduce the change to the “weight basis” for valuation of “Hog Fuel”, but it is increasingly apparent that this will ultimately be necessary and the change should be advocated at every opportunity.

How is this fuel to be weighed? It is bulky and a plant of any size burns so much daily that the problem is not easy.

When fuel is transported in trucks or cars they can be routed over platforms or track scales. The cost should not be great in the majority of cases.

When fuel is handled in barges the weighing is more involved. For some time users of Hog Fuel have checked their results by getting the weight of fuel by the displacement of barges in which the fuel is transported. This required the measurement of the barge and de-

\*Paper presented at the Spring Meeting of the Pacific Section of TAPPI, Everett, Washington, April 18, 1931.

termination of its load line before and after unloading. Such measurement will permit the computation of weight with reasonable accuracy.

Many years ago attempts were made to weigh Hog Fuel on conveyor belts by "belt scales". Because of inaccuracies these attempts were abandoned. With the improvements that have been made in such scales, they should again be considered as a means of weight determination. Belt scales have been used to weigh sulphite chips and the author understands these installations have proven successful.

The moisture determination is a simple matter and any mill laboratory is equipped to weigh—dry out—and reweigh fuel samples. From this data percentage of moisture can be computed.

With a knowledge of weight as received and the moisture content, the number of B. T. U's can be computed, using 8,800 B. T. U. per pound as a factor.

The total B. T. U. content does not tell the whole story, with respect to the relative value of two fuels. A further analysis should be made taking into consideration the higher losses in the flue gas for fuels containing high moisture as indicated later in this paper under the subject of boiler efficiency.

#### Air Preheaters

Due to the large amount of heat carried away in the chimney gases per pound of flue gas or per B. T. U. in the fuel, air preheaters are desirable and will usually be justified.

Frequently, however, the results obtained are optimistically expressed in terms of the drop in gas temperature across the air heaters. This is misleading and because of air heater leakages and radiation losses, does not show the heat saving effected by the air heater. Especially with regenerative heaters do such reports give apparent savings which are not realized. Performance results should show the heat returned to the boiler by the air heater. CO<sub>2</sub> determinations should be made frequently on both sides of an air heater to determine the air leakage.

Due to setting leakage, irrespective of type of fuel, the air contained in the boiler gases at boiler output does not all pass thru the air heater. With Hog Fuel additional unheated air enters the furnace with the fuel. Usually calculations for air preheaters with Hog Fuel are based on from 70 to 85 per cent of the air being heated. The air entering with the fuel should be kept to a minimum by closed chutes, continuous feed and fuel seals or mechanical seals.

Obviously boiler settings should be maintained in proper repair to minimize air infiltration. If it were possible to maintain bottle tight settings and preheat the air, we would still be unable to secure as much gas temperature depression as air temperature rise, because of two factors—first, the greater weight of gases than of air by the amount of the weight of fuel and moisture in the fuel and, second—the higher specific heat of gases than of air.

Both the ratio of the weight of gases to the weight of air, and the ratio of the specific heat of gas to that of air vary directly as a function of the moisture content of the fuel and inversely as a function of the excess air. This results in a variable ratio between air temperature rise and gas temperature depression dependent on the percentage of moisture in the fuel and the closeness with which the excess air is held to actual combustion requirement.

A set of curves in this study have been worked out for a typical "Hog Fuel" and which show plainly the variation of these constituting factors, as well as

the above mentioned temperature ratios. It should be borne in mind that without air preheater leakage or radiation loss, the ratios as shown in the attached curves are based on heating 100 per cent of the air passing thru the boiler, and must be divided by the percentage of the total air that is preheated to obtain the temperature ratios.

It will be apparent that, with 80 per cent of the air preheated, the temperature ratio could be anywhere between 1.50 and 2.00 for the range of excess air and moisture represented by the attached curves.

In the past we have been somewhat limited as to safe total air temperature by the increased grate maintenance with high temperature air. By using properly designed and constructed water-cooled grates, this limitation is removed. Possibly additional refractory maintenance would indicate that the present preheated air temperatures should not exceed 500° F. Assuming 500° air as a safe limit and 80° boiler room air temperature, we have a rise of 420°. This would only permit a flue gas temperature depression of from 280° to 210° for the range of ratios above stated.

It would of course be desirable to be able to operate at from 250 to 300 per cent of rating to keep down fixed charges per unit of output. These high ratings with Hog Fuel result in high boiler exit gas temperatures (over 700°) and it would, of course, be economical to be able to reduce them in the air preheater to in the neighborhood of 350° if preheated air temperature limitations did not prohibit.

The foregoing is presented to show how very important it is, in order to keep down exit gas temperatures and lower the leaving losses, to be able to use high air temperatures and to preheat a maximum percentage of the air that passes through the boiler.

Note—In the third part of this paper, entitled "Boiler Efficiencies With Wood Refuse", Mr. Beecher gave a detailed and technical formula for an "efficiency prophesy". In explanation he said that "comparisons on the basis of available B. T. U. are misleading and that boiler room efficiencies are preferably computed by comparing the B. T. U. imparted to the steam to that supplied in the fuel. Most of the data for the "efficiency prophesy" can be supplied from modern boiler room instruments with which to check performance. The formula is intended to set a "bench mark" for performance with hog fuel, against which checks can be made on operating results—daily—weekly—or monthly, to keep the boiler plant tuned up to secure the best possible results from equipment and fuel.

#### Willamette Using Novel Construction Method

Down at Longview, Washington, where the Cowlitz river lays its burden of mountain waters upon the broad bosom of the Columbia, and where logs from the timbered hillsides for many miles around find their way thru the pulp and lumber mills into valuable commercial products, the Weyerhaeuser Timber Company is extending its vast wood-using industries by building a 150-ton bleached sulphite pulp mill on its mile-square site on the river front.

Ray Smythe, whose diligence as manager of the Willamette Iron & Steel Works of Portland landed an order for Weyerhaeuser's six digesters and also for the acid accumulator tanks, calls attention to the fact that the latter job has been completed and digester erection began with the first of April.

In erecting the accumulator tanks the domes were completely riveted up and hoisted into place as a unit. Mr. Smythe states that, in his belief, this is the first time construction of vessels such as these has been attempted in this manner. The domes are 17 feet in diameter and are rather heavy and awkward pieces to handle.



## A Papermaker's Version of PROPER CARE OF RUBBER COVERED PRESS ROLLS\*

By G. ELMER EMIGH, Superintendent  
St. Helens Pulp & Paper Company

Much thought, care and time must be given to rubber covered press rolls, in both fourdrinier and cylinder machines. There are also many things that are of vital importance in the proper handling of rolls to get long life, and long runs between grindings.

The writer has found it necessary, first of all, to get the right density suitable for the number of presses on a machine, starting at the first press, provided that a suction couch is run.

Many mills have used granite rolls on top, causing very limited felt life. If granite rolls could be replaced by a good rubber covered roll, say with 1" thickness, and a density of 30 to 35, felt life could be prolonged, and better couching, as well as many breaks saved, which occur as the result of the harder rolls.

Getting to the second and third presses. A density ranging from 60 to 65 should be sufficient. If granite top press rolls are used, a density around 65 has been found very successful. If wooden top rolls are used, the density could run to 70, and good long life could be had on the rolls.

Regarding the proper care of press rolls, say when they are changed, and lay around for re-grinding, the writer has found it very advantageous to keep the rolls in a good cool place, where atmospheric conditions are not very changeable.

### Keep Moist

It is common practice, when a roll is changed on Sunday, to let it set in a wooden box to keep falling objects from putting holes, cuts, etc., in the roll. Often the roll is set near the dry end of the machine room, which will cause the rubber to become hard and check. It is further a common practice to grind the rolls just as soon as they are taken out of the machine, to a certain crown, and let them set for weeks before being put back in the machine. This, I have found, to be a very bad practice, as the roll will glaze and check very quickly, and good long runs can not be expected.

But, if the rolls are left to set around the wet end, in trucks, with the weight all resting on the journals, and the rolls covered with wet felt, and kept wet with the hose every day, this will keep them from checking. Then again, if the roll is to be changed on a Sunday, it should be ground on Saturday or Friday and good results can then be expected. This will eliminate much wash boarding such as is experienced in many mills.

Proper alignment is also of the greatest importance. Boss machine tenders should very often drop a line and plumb bob down over the face of the top roll and line up the front and back side.

Too much stress cannot be applied to the proper care of rolls that are let run too long, say where a screw or small bolt, or some other hard substance has gone through the press. Just as soon as possible, a good vul-

canizer should be called in, the place cut out, and a good job of dove-tailed vulcanizing made in the roll. If this is not done, water will soon wind and worm its way in and around the core of the roll, loosening the rubber, and often causing a large blister or loose place to show around the surface of the roll.

If proper care is taken, as explained above, the writer has found that rolls will last several months without re-



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Superintendent

ST. HELENS  
PULP & PAPER CO.

grinding. Rolls that last a number of years without having to be recovered are quite common.

The manufacturers are often blamed for turning out a poor and inferior roll, whereas if the roll had been given proper attention by the mill hands, much grief and expense could have been saved.

### Pacific Mills Get Radio Phone Link

Pacific Mills, Ltd., Canadian subsidiary of Crown-Zellerbach Corporation with mills at Ocean Falls, B. C., were brought into direct touch with the outside world this month when the B. C. Telephone Company established a radio link between the pulp and paper town and Campbell River, near the north end of Vancouver Island.

From Campbell River communication is relayed by wire and then from Nanaimo to Vancouver the messages are conveyed by submarine cable. The new arrangement has the effect of bringing Ocean Falls many hours closer to the Vancouver head office.

F. N. Youngman, vice-president of Pacific Mills, Ltd., and D. G. Stenstrom, resident manager at Ocean Falls, took part in an inaugural ceremony at which several prominent British Columbia business leaders were present.

This new radio link is the first of its kind to make use of short length radio waves, according to C. H. McLean, transmission engineer. "Ocean Falls", he pointed out, is about 300 miles north of Vancouver and is practically surrounded by mountains. The first thing that the radio waves leaving Ocean Falls have to do is to leap over Sawmill Mountain which stands close to the town and rises to a height of 3,800 feet.

"The voice is thrown into the ether from Ocean Falls and makes its way to Campbell River, a distance of 210 miles, at a speed equal to that of light—about 186,000 miles per second. About one sixty-sixth millionth of the power which is transmitted to Ocean Falls is picked up at Campbell River, where voice currents are amplified more than a million times, and sent over the wires to Nanaimo, where they are again strengthened.

\*Paper presented at the Spring Meeting of the Pacific Section of TAPPI, Everett, Washington, April 18, 1931.



# Bleachability Determinations Of Sulphite Pulp

By N. W. COSTER

Puget Sound Pulp & Timber Company

Next to physical tests on sulphite fibres, the determination of the bleachability is the most important test. The plain operator as well as the sales department are always in need of a true figure as to bleachability in as short a time as possible. Several ways with many variations in details have been devised to this end and it is not my aim at present to discuss them all but only report about two methods which we think we have built up along sound lines and which have proved to be a great help to the salesman and operator.

The methods of testing the bleachability of sulphite generally can be divided into three groups, namely:

1. Direct methods.
2. Chlorination methods.
3. Permanganate consumption tests.

## Three Methods

1. In the direct method, pulp is bleached in at least two samples with different amounts of bleach liquor to a standard white color. If at least two, better three samples are bleached simultaneously and if the wet pads are kept uniform in surface condition and moisture the determination of the final color with a standard pad is comparatively easy and exact. Generally the aim is to exhaust the bleach liquor. But the whole question takes about four hours.

2. The chlorination methods use either bleach liquor and titrate after one hour or so the amount of unused active chlorine, or they use chlorine gas (Roe's chlorine No.). The chlorine number multiplied by a factor, which has to be determined experimentally (generally around 5) gives the amount of bleach powder required to bleach the pulp. Unfortunately, the factor, according to Genberg, depends on local mill conditions and probably on wood. The time necessary to make a chlorine number is 20 minutes and it should be done twice as there is always danger of an error through gas leakage.

3. Apparently the most convenient and quick bleachability determination is made with permanganate, which, however, with some variations in method does not seem to give very reliable results. Roschier and Cadigan suggested to shake a small sample of pulp with a certain amount of standard permanganate solution made acidulous with sulphuric acid and note the time for discoloration. By comparison with the direct method the bleachability could be estimated. But with hard bleaching pulps and especially with changes in wood, which occur more frequently on this coast, the results also became rather unreliable.

Johnson and Parson suggested to treat pulp samples with permanganate solution for one hour at 25° C and titrate the excess with oxalic acid. Again the time needed for this test seems to be too long for routine use.

With Bjorkmans method pulp is treated with po-

tassium permanganate solution for 30 seconds and the amount of oxygen consumed is determined by titration with ferrous sulphate.

By using the principles of this last named method I think we were able to develop a very reliable procedure which not only withstood changes in raw material but also took care of unusual variations in bleachability. In our effort to standardize we naturally made permanganate figures not only with solutions of different strengths but also varying amounts of this agent and weight of fibres. Also the reaction time was varied from 2 to 10 minutes. The method finally adopted as the most suitable was as follows:

Weigh up exactly 5 gr. centrifuged pulp (equal to 2 gr. Air dry pulp) and put into a tall beaker. Add 132 cc water, insert stirrer and mix well.

Then add 50 cc N/10 potassium permanganate and 25 cc 10% sulphuric acid, already mixed in a small beaker, and at the same time start the stopwatch. Rinse out permanganate beaker with 20 cc water and add to pulp mixture.

Stir for exactly 2 minutes by stopwatch then add 50 cc N/10 ferrous ammonium sulphate by means of the small beaker. Again rinse out beaker with 20 cc water which is to be added to the pulp mixture. keep on stirring till the solution is colorless.

The total volume of the solution is now 300 cc. Filter on a Buchner funnel through a fine filter cloth without diluting or washing. Pipette off 100 cc of the filtrate and titrate with N/10 potassium permanganate to pink color.

## Reliable

The amount of potassium permanganate used for titration is called the permanganate number and the pulp's bleachability is read off the curve from the corresponding permanganate number.

With a pulp's bleachability is here understood the amount in grams of bleach powder necessary to bleach 100 grs. of air dry pulp to a standard whiteness and at a consistency of 5% in a laboratory water bath.

The temperature of the pulp mixture has been kept at approximately 70° F. which was found to be the most convenient.

The solutions used are as follows:

Potassium permanganate	3.1606 gr. $\text{KMnO}_4$ per liter
Ferrous ammonium sulphate	39.21 gr. $\text{FeSO}_4 (\text{NH}_4)_2 \text{SO}_4$
	$6 \text{ H}_2 + 50 \text{ cc conc. H}_2\text{SO}_4$ pr. L.
Sulphuric acid	10% by weight

If, for instance, a pulp's bleachability with this method is found to be 15%, it does not mean that it will consume this amount in every case. This consumption naturally depends on color desired. The reliability of the method is shown by the following figures:

The ratio between the actual bleach consumption in

\*Paper presented at the Spring Meeting of the Pacific Section of TAPPI, Everett, Washington, April 18, 1931.

the mill and the one determined according to this method was found to be—

for January 1 : 1.04  
for February 1 : 1.06

These figures prove that the method is accurate enough for practical mill use.

#### Semi-Bleached Pulp

The method just described has not been found convenient for pulps with a bleachability less than 10%, as for instance semi-bleached pulp going to second stage bleachers, because the low magnitude of the permanganate number unduly increases the error when converting into bleach figures. In order to provide the mill with a reliable test which told how much bleach liquor had to be added to the second stage bleachers the following method was worked out:

Weigh up exactly 10 gr. centrifuged pulp (equal to 4 gr. air dry pulp) and put into a tall beaker. Add 149 cc of water, insert stirrer and mix well. Then add 100 cc N/50 potassium permanganate and 5 cc 10% sulphuric acid, already mixed in a small beaker, and at the same time start the stop-watch. Rinse out permanganate beaker with 20 cc of water and add to pulp mixture. Stir for exactly 5 minutes by stopwatch and then add 100 cc N/50 ferrous ammonium sulphate by means of the small beaker. Again rinse out beaker with 20 cc water, which is to be added to the pulp mixture. Keep on stirring till the solution is colorless.

The total volume of the solution is now 400 cc. Filter on a Buchner funnel through a fine filter cloth without diluting or washing. Pipette off 100 cc of the filtrate and titrate with N/50 potassium permanganate to pink color.

The amount of potassium permanganate used for the titration is called the permanganate number and the bleachability is read off the curve from the corresponding permanganate number.

With the bleachability, of course, is here understood the same as for unbleached pulp. The temperature of the pulp mixture is also the same as mentioned above.

The solutions used are as follows:

Potassium permanganate: 0.6321 gr.  $\text{KMnO}_4$  per liter.  
Ferrous ammonium sulphate:

7.8428 gr.  $\text{FeSO}_4 (\text{NH}_4)_2 \text{SO}_4 \cdot 6\text{H}_2\text{O}$  +  
10 cc conc.  $\text{H}_2\text{SO}_4$  per liter.

Sulphuric acid: 10% by weight.

The permanganate number obtained by this method can easily be converted to inches bleach liquor if the dimensions of the bleach liquor tanks and the consistency in the bleacher is known.

In our case a permanganate number of 6.7 corresponds to 20 inches of bleach liquor. If, however, a higher color than our standard one is desired more liquor must be added and if on the other hand color is not so important less liquor may be added.

Before finishing I wish to express my thanks and appreciation to Mr. Ossian Anderson for permission to publish this paper, to Mr. G. J. Armbruster for the support he has given these experiments and to Dr. E. Richter for very valuable help and suggestions.

#### Teaching the Teachers Papermaking

Frank Killien and Jack Smith of the Everett Pulp & Paper Company, Everett, Washington spent most of an afternoon recently in conducting members of the local county teacher's council thru the paper making plant. The trip embraced all departments of the mill with explanations of the fundamental processes.

#### Revive River Traffic for Paper Shipments

Steel barge operation on the Columbia River between Camas, Washington, and The Dalles, was inaugurated Monday morning, March 30, by the Western Transportation Company, subsidiary of the Crown Willamette Paper Company. L. R. Gault is manager of the transportation company.

The initial shipment consisted of 225 tons of fruit wrapping paper consigned to fruit growers and shippers in the rich fruit districts in the inland regions. From The Dalles, truck shipments will take the paper to destination.

The barge was towed by the tugs Annie Commings and R. W. Confer as far as Cascade Locks, and from there to point of destination by the Confer alone.

The first trip was made largely by way of experiment, but service will be maintained regularly if operation is found economically sound. Costs had been estimated at one-third less than by rail. Barge shipments would extend over four or five months, with 4,000 to 5,000 tons of paper moving in that period.

River men had predicted that the barge would be unable to proceed through the Bridge of the Gods rapids and this almost proved true as the paddles of the sternwheeler steamer Annie Commings were forced above the surface of the water in futile attempts to push the barge through the current.

Fastening the barge to the shore by cables, the steamer withdrew from the side and proceeded upstream alone several hundred feet above the rapids. It then attached a cable to the barge and was successful in towing it to the locks whence it was taken the rest of the way to The Dalles by the tug boat R. W. Confer. It took about six hours to make the trip.

#### Container Corporation Ousts Brunt Faction

Stockholders of the Container Corporation of America at their annual meeting in Chicago in March registered a strong vote of confidence in the present Paepcke management, over three-fourths of the votes cast being for the board of directors proposed by the management. The board proposed by the Brunt group, who have been waging a proxy fight, polled out a minor fraction of the entire vote cast, the banking groups throwing their votes with the Paepcke management.

Directors elected at the annual meeting were: Sewell Avery, president of the United States Gypsum Company; William R. Bassett, partner of Spencer, Trask and Company; Walter P. Paepcke, president of Container Corporation; E. R. Hankins and F. G. Becker, vice-presidents of Container; H. B. Clark, representative of Sefton stock interests, and Charles W. Seabury, vice-president of Marsh and McLennan.

At a subsequent directors meeting by-laws of the company were amended to increase the board of directors from seven to eleven. Four additional directors named by the board were William P. Jeffery, of Jeffery and Redmond, Industrial Engineers of New York; George Meade, president of the Meade Pulp & Paper Company; George Greene, partner of E. H. Rollins and Company, New York, and Wesley M. Dixon, vice-president of Container.

Officers of the company were reelected by the board of directors with the exception of J. P. Brunt, executive vice-president.

Charles K. Spaulding, president of the Spaulding Pulp & Paper Company, Newberg, Oregon, has been appointed a member of the Oregon state highway commission.

### The Paper and Pulp Industry in January 1931

According to identical mill reports to the Statistical Department of the American Paper and Pulp Association from members and cooperating organizations, the Daily Average of total paper production in January increased 3% over December but was 21% under January 1930. The Daily Average wood pulp production in January was 1% under December 1930 and 24% under January 1930.

Compared with January a year ago, the Daily Average production registered a decrease in the following grades: Newsprint, uncoated book, paperboard, wrapping, bag, writing, hanging and building papers. The January 1931 Daily Average production of paperboard, bag, tissue and hanging papers was lower than in December 1930. Total shipments of all major grades decreased 18% during January 1931 as compared with January 1930.

Identical pulp mill reports for January 1931 indicated that the total pulp consumed by reporting mills was 20% less than for January 1930 while total shipments to the open market during January were sharply below the total for January 1930.

All grades of pulp, excepting bleached, easy bleaching, mitscherlich sulphite and kraft pulps, registered decreases in inventory at the end of January 1931 as against the end of December 1930. As compared with January 1930, soda pulp was the only grade whose inventory registered a decrease.

#### REPORT OF PAPER OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF JANUARY, 1931.

GRADE	Production Tons	Shipments Tons	Stocks on Hand End of Month— Tons
Newsprint	105,527	104,769	32,903
Book (Uncoated)	71,827	72,500	62,258
Paperboard	153,989	148,388	63,451
Wrapping	46,358	44,965	42,390
Bag	10,658	10,258	6,871
Writing, etc.	26,933	28,735	49,805
Tissue	14,730	14,947	13,552
Hanging	4,294	4,034	4,493
Building	3,595	4,222	2,880
Other Grades	17,780	16,930	15,625
<b>Total—All Grades</b>	<b>455,691</b>	<b>449,748</b>	<b>294,228</b>

#### REPORT OF WOOD PULP OPERATIONS IN IDENTICAL MILLS FOR THE MONTH OF JANUARY, 1931.

GRADE	Production Tons	Used During Month—Tons	Shipped During Month—Tons	Stocks on Hand End of Month— Tons
Groundwood	70,254	68,343	2,287	47,770
Sulphite News Grade	31,030	29,863	1,459	6,476
Sulphite Bleached	22,251	20,230	2,144	4,624
Sulphite Easy Bleaching	2,969	2,578	365	1,394
Sulphite Mitscherlich	7,216	6,015	868	1,702
Kraft Pulp	26,066	22,191	3,867	7,945
Soda Pulp	18,864	15,072	4,269	2,769
Pulp—Other Grades	34		49	19
<b>Total—All Grades</b>	<b>178,704</b>	<b>164,292</b>	<b>15,308</b>	<b>72,699</b>

Fred L. McClellan, founder of the McClellan Paper Company, Minneapolis, Minnesota, was a Coast visitor in April. Mr. McClellan, who recently sold his interest in the company, is touring the West Coast and plans to spend several weeks in Los Angeles before returning to his Minneapolis home.

### Lundberg To Visit Sweden

A. H. Lundberg will leave Seattle on April 24 for New York to sail for Sweden on April 30. He is taking his family with him and will be abroad until about September 1.

Mr. Lundberg has been on the Pacific Coast for about four years representing the interests of the G. D. Jenn-



A. H. LUNDBERG  
Pacific Coast

Representative  
G. D. JANSSEN CO.

sen Company, of acid tower fame, and other purveyors of equipment and processes auxiliary to the pulp and paper industry.

During Mr. Lundberg's absence the Seattle office at 1017 White Building will be taken care of by C. Skoldebrand of the New York office.

### Sidney Frohman Comments On Pulp Industry

Commenting on a recent article appearing PACIFIC PULP AND PAPER INDUSTRY which discussed a current situation in the pulp markets, Sidney Frohman, president and general manager of the Hinde & Dauche Paper Company, remarks:

"The thing that impresses me most is that in spite of Swedish, Finnish and other European competition, the American pulp industry has progressed so rapidly and developed so widely."

Writing further from his Sandusky, Ohio, offices where Hinde & Dauche operate an extensive plant for the manufacture of fibre containers, Mr. Frohman says further:

"Naturally, as a large consumer of wood pulp, I am interested in the retention of the product on the free list and it is, therefore, very pleasing to me to realize that our home pulp industry has been able to achieve adult proportions without the aid of a protective tariff, and that at its present rate of progress, it will eventually take care of the entire home market."

### Puget Sound Pulp to Many Ports

Bleached sulphite pulp from the new 175-ton mill of the Puget Sound Pulp & Timber Company at Everett, Washington continues to move out to far corners of the globe. Recent shipments over the mill's own deepwater dock included parcels aggregating several hundred tons to Boston; Bordeaux, France; Shanghai, China; Yokohama, Japan; England and India.

A. J. Lewthwaite, of Portland, Oregon, a director of the Spaulding Pulp & Paper Company, Newberg, left early this month for Del Monte, California, for a month's vacation.



## Some New Principles in Valve Design

By WALTER G. E. SMITH, President

Smith & Valley Iron Works Co., Portland

The main difficulty with the plug valve is its inability to open and close freely under all conditions. This is accentuated to a great degree when the valves are carefully assembled and made watertight. The standard type valves trap the stock in the guides and seat, preventing proper closure, necessitating excessive labor to maintain a reasonable degree of efficiency.

The new Smith Gate valve, upon which patents are now pending, was developed out of necessity to meet a stock handling problem of more than ordinary severity in a Pacific Coast mill. Ordinary gate valves had failed to operate satisfactorily for more than a few hours, soon clogging and sticking. The job was to handle heavy stock under a head of approximately 60 feet.

The Smith Gate valve was developed with the idea of eliminating the objectionable features of gate valves formerly used. It worked so well that now a number

of the new type stock valves are operating without attention of any kind in this same mill.

An important point of difference as compared with the plug type is the reduction to an almost irreducible minimum of the contacting areas between which stock may lodge and at the same time allow sufficient clearance for proper guidance. The areas in the older types are excessive, and this factor is a chief contributing factor for failure.

The ordinary gate valve is forced, on account of its design, to trap stock and build up layer after layer until the groove or seat is filled to the top. This type of valve has never been considered a complete success for pulp or paper mill use.

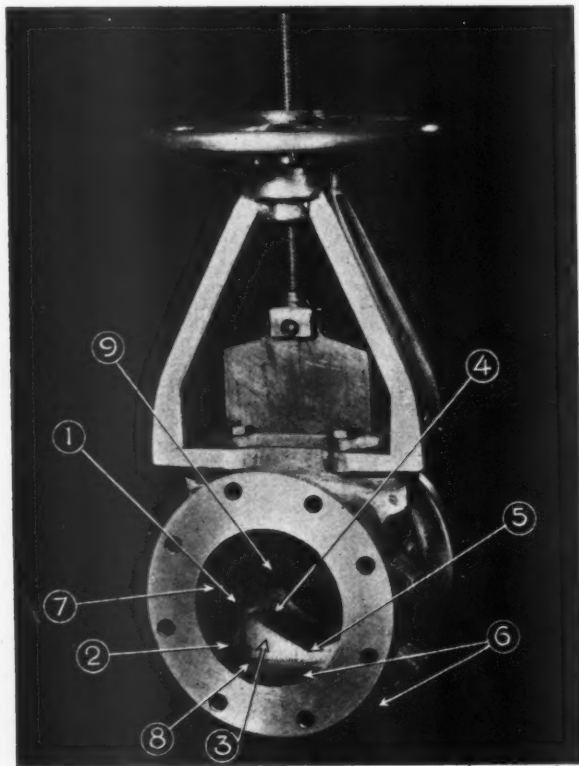
The body of the new Smith Gate valve is cast in halves and all faces are machined. Spacer bars, in which are milled the guide slots, are bolted between the two halves when assembled. The intake half of the body is standard on the flange side being circular but becomes practically rectangular at its inner face or middle section of the body. The discharge half is also standard on its flange side but becomes rectangular in the top of the middle section of the body and "V" shaped at the bottom, the apex of the "V" being elevated from  $\frac{1}{2}$  to  $1\frac{1}{2}$ " (depending on the valve dimensions) above the floor of the intake half of the body. The sides of the gate are rounded to conform to the guide slots in which it is carried, and the bottom is beveled to the intake side of the body. The bottom of the guide slots are cut away or relieved on the intake side to an elevation conforming with the bevel edge of the gate and in depth to the center line of the guide slots.

### In Operation

In operation, the bevel edge of the gate plows or pushes ahead of it whatever stock has collected in the guide slots when the gate is open, until the gate reaches the relieved area near the bottom of the guide where it is automatically forced into the main body of the valve. When the gate passes the "V" shoulder or seat at the bottom of the discharge half of the valve body, a uniform plowing and shearing action takes place, the stock moving simultaneously downward and toward the apex of the "V" where it is either sheared off or forced into the main body of the valve. Through the incorporation of the various details of construction we found that:

1. No stock can be permanently trapped in the guide slots, the gate always forcing it into the main body of the valve when closed.
2. No stock can be trapped in the valve seat as the seat is practically non-existent with its open side.
3. Operating elements in contact are reduced to a minimum, and in consequence, friction and corrosion.
4. The reduction in power to operate assures positive action when required; the possibility of the gate sticking at any point is entirely eliminated.

In case of emergency it is possible to clean out or drain this valve easily in several ways.



In this illustration of the new Smith Gate Valve the numerals refer to significant features, as follows: (1) guides in which stock is not trapped (2) plowing action of bevel-edged gate forces stock out through relieved area at bottom of guides (3) "V"-shaped shoulder designed to automatically clean face of seat (4) construction of middle section of valve body designed to prevent any restriction of opening (5) bottom of "V" on level with intake and discharge openings (6) access plate and plug (7) tapped openings for water connections (8) elimination of pockets (9) minimum friction area.



# More Trade in the Rocky Mountains—

## Can the Pacific Coast Paper Mills Get This Business?

By JOSEPH BAMBER, Jr.

Butler Paper Company, Denver

**A** DIRECT answer to the question, "What are the possibilities of the Pacific Coast mills expanding their market in the Rocky Mountain region?" can well be a terse "unlimited". That answer, however, is so general, so indefinite, as to require lengthy elucidation punctuated with multitudinous "ifs", "buts" and "whereases".

The whole matter is hemmed in with so many ramifications, depends on so many contingencies and throws open such an array of issues and controversial points as to make explanations by even the widest generalities precarious business. The writer will attempt to paint the picture as it appears to him and as he conceives it to be in the eyes of the men engaged in the paper industry in the Rocky Mountain region.

The reader must bear in mind that the writer's opinion was requested; that the matter contained herein must be considered in the light of opinion and that any controversial points raised are not so raised with malice aforethought. There is no intentional stepping on toes, no effort to show any preferences and no wish to belittle any one source of supply as against others.

In the matter of a paper market the Rocky Mountain region cannot be taken as a whole. Utah, Nevada and Arizona are logical Pacific Coast trade territory as, of course, is Idaho. Wyoming and New Mexico, geographically at least, belong in the same category and to a lesser degree Colorado is so considered. The three latter states, however, with Denver as the focal point, are fair game for many markets, East, West, Northwest, Northeast, Southwest and Southeast. The bars are down, the roads are open and the business is here for those who come and get it. On the methods of holding, rather than on the methods of getting, lie the future possibilities of the market.

### Logical Territory

"Logical territory" presupposes numerous conditions. Among them are proximity to the mills, satisfactory transportation charges, sectional solidarity and tradition. Naturally enough, logical territory gives a mill a prior right, or at least a prime hope, of getting the business in that territory. But such territory is merely a first consideration and is by no means a prime requisite. Infinitely more important are the items of quality, variety, rapidity of delivery and price.

What any market demands is the possibility of securing a complete line of goods, with due consideration to quality, quantity and variety, a fair price, equitable rates combined with prompt and efficient service. Mills able to meet all these requirements need not worry as to how to get the business; they have it. Those which cannot meet these considerations, some of which, it must be confessed, are beyond their control, must do so before they can claim their full share of the business.

Obviously no jobber insists that all the above requirements be met before he makes a single purchase. Should he attempt to do so he would be in dire straits for a source of supply. He makes purchases of all items where it is to his best interests to do so. Most of his purchases, nevertheless, will be made in those markets more closely conforming to the considerations which have been listed.

Taking up the consideration of "logical territory" the Denver trade area belongs as much to the midwest distributing points—Chicago, St. Louis, Minneapolis and St. Paul, primarily—as it does to the Pacific Coast. This is due to the fact that deliveries can be made, under existing schedules, in generally shorter time than from the principal Pacific Coast centers. Rates generally favor the Eastern cities and thus place the Pacific Coast at a disadvantage. On the other hand, this region is proud of being a part of the West and, other things being equal, will give its trade to the West. This strengthens the claim of the Pacific Coast cities that the Eastern Rocky Mountain region is their logical territory.

### Complete Lines

Allowances must be made in the above for other conditions prevailing as regards New Mexico. El Paso and Kansas City enter the field here as challenging the supremacy of other markets, notably Los Angeles and San Francisco. Many New Mexico points are thus in an even more independent position than is the territory nearer Denver.

Of vast importance to the jobbers of this area is the consideration of securing complete lines. The old established mills of the East have a distinct advantage in this respect. The newer mills of the Pacific Coast have not as yet been able to manufacture the varieties offered by their Eastern competitors. Those lines made only in the East obviously must be sought there and it can be seen easily that other items, which could be bought in the West, are often purchased at the same time as a matter of convenience. The Pacific Coast lines are extremely limited at present and it is more difficult for the Coast mills to put the items they do manufacture into this region than it is for the Eastern mills with their wide variety.

Gradually the Coast mills are developing new lines and as they do they are being bought up in the Rocky Mountain region. As more are developed they, too, will be bought here, provided, of course, they can be brought in on a competitive basis. In many items the Coast is getting the lion's share of the business and there is every reason to believe the introduction of new items will result in a greater volume of business in the lines now being offered.

As to quality it is generally conceded that the Pacific Coast items are as good, and in many cases better than similar items produced in the East. Such a repu-

tation earned in so comparatively short time indicates the possibility of the Coast supplanting many of the products now brought in from the East.

The Coast mills already have the edge over Eastern plants in news print and coarse papers, particularly butcher papers, cheap sulphite bonds, flat writings, mimeograph papers, kraft, bags, tissues and other staples. In converted items as well they have reached a competitive stage and are now getting a full share of the business in waxed papers, transparent meat wrappers, glassine, adding machine rolls, gum tape and the like.

The Coast is increasing its business rapidly in these items because of offering equal quality at a lower price or better quality at the same price, because freight rates on these products are close to or the same as those from the East and because, as they gain more experience in their manufacture they are turning out continually improved goods. The Denver trade area is rapidly gaining higher respect for Pacific Coast papers and with the same continued progress as has marked the past few years this respect should grow in proportion.

#### Freight Rates

Freight rates in the Rocky Mountain region are a vital factor—more so than in any other section of the country. Sparse population, great distances, mountainous country have resulted in higher tariffs being charged for hauls into the region. These rates, it is well known, are not proportionate to the haul and thus distance from the mill is not the determining factor. Since hauls from the Coast traverse mountainous territory freight rates are generally higher into this market than those charged for the hauls from Eastern points. In some cases the rates from the Coast are lower—particularly on the heavy tonnage classifications—but only where the Coast already has the edge in a particular product. Rates seem to favor the particular Eastern mill whose products at this time are most highly competitive with West Coast products.

The following quoted rates showing tariffs from Seattle and Portland to Denver, Pueblo, Cheyenne and Santa Fe as against those rates charged from St. Louis and Chicago to the same cities will illustrate the point:

Freight Rates on Book Paper				
To:	Seattle	Portland	St. Louis	Chicago
Denver	78	78	67½	74½
Pueblo	78	78	—	—
Cheyenne	78	78	—	—
Santa Fe	78	78	83½	95½
Freight Rates on Writing Paper				
Denver	78	78	82½	90
Cheyenne and Pueblo	78	78	—	—
Santa Fe	78	78	101½	116
Freight Rates on Wrapping Paper				
Denver	78	78	67½	74½
Santa Fe	78	78	101½	116
Freight Rates on Newsprint				
Denver	63½	63½	61½	67½
Santa Fe	63½	63½	76	87

Obviously the Rocky Mountain region buys its bulk from the Coast and its finer paper products from the East.

Tradition and sentiment do play a part in the paper business of the Rocky Mountain market. Both, to be sure, are tempered by the economic element. The former works to the advantage of the East while the latter is in favor of the Coast. After years of use of particular items under old and established and even

famous trade names it is a difficult matter to change over to a new and untried and certainly unknown brand. The papers which have been nationally advertised for decades until they have become by-words with the trade will not be abandoned until some highly superior paper supercedes. Such an eventuality requires time. Even when such a paper appears it will be long before the satisfied users of the old can be induced to make the change.

Tied up with tradition are long and happy business relations with the makers, the fine established service given, the knowing-when-and-how the goods will be received. Like a man will stand by the particular make of car his judgment has once hit upon he will continue to use a satisfactory brand of paper for long after a better article has appeared. In time he will get around to the better article, but it will be in his own time.

#### Sentiment

Sentiment will tend to have the purchaser buy in the West because it is the West, but that will extend only to the products he can buy which are as good as he can buy elsewhere and as cheaply as elsewhere. Sentiment is even more firmly wedded to the pocketbook than tradition.

The box makers of the Rocky Mountain region are able to get their box board locally and do so as a matter of convenience. The Coast offers them good board, but as a rule not the finer items associated with the manufacture of higher grade boxes. Box covers for the fancy varieties, clay coated box boards and glazed papers are sought in other markets and many of the items which they could secure on the Coast are bought where they can get all their needs satisfied.

Here again is the straight car problem—the buying in sufficient quantity to warrant assembling a car—and to do so several items will go to make up the shipment.

As it stands today the Rocky Mountain paper consumer looks to the Coast for his coarse papers and for his finer varieties he turns to the East. He is watching the development of the Coast industry and gives it his blessing with as much of his business as he deems good practice for him. He feels that the West will gradually force the East to confine its manufacturing entirely to the higher grades.

#### In Summary

In summing up the possibilities of the Pacific Coast extending its market in this territory a few suggestions as to what the Coast mills must do are in order. They must increase their lines so as to give the Rocky Mountain purchaser a variety wide enough that he might buy in carload lots. They must make it easy for him to combine a carload. They must work toward changing the attitude of the buyer, getting him in the habit of looking to the West to supply his needs. Their products will have to become better known if they are to supplant those of the East. More extensive advertising of them will put them more on even footing with competitive papers. Whatever they can do toward securing more equitable freight rates will serve in their favor. Even the matter of hurrying up train schedules must not be overlooked, for the time element in delivery is a major one.

The West has the virgin forests, the newer mills and the brighter future. The Rocky Mountain region will have a gradually increasing demand for paper and the West has the opportunity of serving this demand.

# S · A · F · E · T · Y

FIRST — LAST — ALWAYS

The best safety device known is a careful man

Pacific Coast Division  
Pulp and Paper Section  
NATIONAL SAFETY COUNCIL

ROBERT H. SCANLON  
Regional Director  
Powell River Co., Ltd.  
Powell River, B. C.

## The Safety Movement From the Plant Manager's Viewpoint\*

By W. L. KETCHEN, Plant Manager  
B. C. Pulp & Paper Co., Ltd., Port Alice, B. C.

THE humanitarian side of SAFETY is a *sine qua non* with all employers, so this paper discusses only the financial aspect. A plant manager's duty is to see that the whole manufacturing operations are conducted as economically as is consistent with the standard of quality demanded by the market for his product.

The economy of manufacturing operations depends largely on team work among the skilled operative employees and non-cooperation of different units in the plant can produce disastrous results. Non-cooperation can be produced by two causes: where workers have no sense of responsibility towards their fellow employees, or their employer; or where labor turnover disorganizes one unit, which, in turn, breaks the chain of production.

Part of the manager's job, therefore, is to see that labor turnover is not excessive, that employees have sanitary and safe working conditions, and that accidents which cause disorganization in a unit are reduced to a minimum.

The safe working conditions can be provided, but the worker himself must be educated to be a safe worker, and this seems a lesson of which the remember-

ing, not the learning, is hard. Men will only work safely when carefulness, not thoughtlessness, has become second nature.

It is safe to say that in a manufacturing plant, more accidents are occasioned by dropped material, slipping, falls, rusty nails and neglected cuts than from all other causes put together. Samuel Pruyn, superintendent of accident prevention of Finch Pruyn Co., Glen Falls, N. Y., contends that most accidents are caused by careless handling of materials and not by the operation of machinery. He claims that the machines are operated by intelligent men who realize the danger of carelessness and consequently know how to guard themselves against accidents. The fine record of their machine department is ample proof of his statements.

The direct cost of 312 accidents in pulp and paper mills in British Columbia in 1923 was \$40,368.00, with a payroll of \$3,797,786.00. In 1929 the cost of 314 accidents was \$41,656.00, with a payroll of \$4,751,837.00. The total cost of accidents over the seven year period was \$230,933, with 14 fatal accidents in all, and in this seven-year period, three years only (1925, 1927 and 1928) were free from fatal accidents. These figures refer to pulp and paper mills only, and the logging and saw milling industry are not included.

In the Port Alice sulphite mill there were 140 acci-

\*This discussion by Mr. Ketchen was prepared as an address to the annual Safety Conference of the Pacific Coast Division, Pulp and Paper Section, National Safety Council, held at Powell River, B. C., February 27, 1931, but owing to the crowded program was given only in summary.

### STATEMENT OF ACCIDENT EXPERIENCE—FEBRUARY, 1931

(Mills in State of Washington)

COMPANY—	Hours Worked	Total Accidents	Frequency Rate	Days Lost	Severity Rate	Standing
Pacific Straw Paper & Board Co., Longview.....	18,232	0	0	0	0	1
Fibreboard Products, Inc., Sumner.....	14,265	0	0	0	0	2
Shaffer Box Co., Tacoma.....	11,026	0	0	0	0	3
St. Regis Kraft Co., Tacoma.....	5,952	0	0	0	0	4
Everett Pulp & Paper Co., Everett.....	69,112	0	0	18	.260	5
Puget Sound Pulp & Timber Co., Anacortes.....	9,796	0	0	28	2.858	6
Washington Pulp & Paper Corporation, Port Angeles.....	66,900	1	15.0	8	.119	7
Grays Harbor Pulp & Paper Co., Hoquiam.....	54,194	1	18.4	60	1.107	8
Crown Willamette Paper Co., Camas, Wash.....	235,553	5	21.2	265	1.125	9
Longview Fibre Co., Longview.....	81,245	2	24.6	21	.258	10
Fibreboard Products, Inc., Port Angeles.....	35,400	1	28.2	4	.113	11
Rainier Pulp & Paper Co., Shelton.....	48,583	2	41.2	6,008	123.664	12
National Paper Prod. Co., Port Townsend.....	76,711	5	65.2	17	.222	13
Inland Empire Paper Co., Millwood.....	58,595	4	68.3	37	.631	14
Puget Sound Pulp & Timber Co., Everett.....	54,287	4	73.7	45	.829	15
Puget Sound Pulp & Timber Co., Bellingham.....	27,208	6	220.6	90	3.308	16

The Following Mills Not Reporting: Cascade Paper Co., not in operation; Tumwater Paper Mills, not in operation; Pacific Coast Paper Mills and Columbia River Paper Co.



dents in the year 1923, in 1928 the number was 43, in 1929, fifty, and 1930 was 37; and 1929 included one fatal accident. Since 1924, a SAFETY Committee has been and is very active, and the weekly SAFETY report is discussed at the weekly foremen's conference, presided over by the plant manager. The result is a marked decrease in accident frequency.

In the logging industry, the cost of accidents in 1923 was \$428,756.00. In 1929 the cost was \$819,198.00, while the cost for the whole seven year period was \$4,176,129.33. This is a very grave economic loss, both of time and money, amounting to approximately \$1.50 per capita, considering the population of British Columbia as 550,000 people.

Based on 1929 accident cost, a sulphite mill pays for both mill and logging accidents about 70 cents per ton of pulp, with the greater portion of this cost originating in the logging camps and beyond a plant manager's control. This accident expenditure must not be looked on as a necessary evil. Firm steps must be taken to reduce this cost to a minimum figure.

#### Executive Interest

That the executive personnel of a logging camp is a vital factor can easily be shown. Three logging camps operate in the same territory and adjacent to each other. In two camps accidents are rare, with only one fatal, over a six-year period. The third camp has quite frequent accidents and several fatals over the same period.

Spasmodic bursts of SAFETY enthusiasm are of little value, and the vital factor for success of any SAFETY campaign depends on sustaining the worker's interest over extended periods. The consensus of opinion of leaders seems to tend to arousing the sportive instincts of the worker, by awarding trophies for competition, teaming up similar industries of a similar size, so that competitors may be evenly matched. Further, localized competition enables the worker to visualize the goal and is a stimulus to consistent effort.

To get worth while opinion of the value of inter-mill SAFETY contests, I wrote Mr. Costigan, engineer secretary, the Ontario Pulp & Paper Makers' SAFETY Association. His opinion is that contests are undoubtedly of value if conducted fairly and mills live up to the rules in a proper sporting spirit and report all lost time accidents and do not get injured employees to punch the clock and then go home. However, if they do that in Ontario, they must place a high value on the honor of winning a contest and interest in the SAFETY movement must have been thoroly aroused.

#### Inter-Mill Competition

A second opinion was received by Mr. F. E. Redmond, director of the Educational Bureau of the Associated Industries of New York State, who is strongly in favor of inter-mill competitions as a means of sustaining interest, and showed on a graph that accident frequency over a three year period had dropped from 32 per million hours of exposure to hazard, to 21.9 per million hours.

A third opinion from Mr. Geo. E. Burns, SAFETY engineer of the National SAFETY Council, tells of a SAFETY contest sponsored by that organization. Trophies and certificates go to the winners and to the runners up. He adds, "If this activity did not tend to increase the interest of workers in SAFETY as well as to directly decrease the number of lost time accidents, it is certain that we would not have the same support year after year by the progressive paper mills of the country. In the first contest but forty odd mills registered, but each year this total was added to until in

1930, 124 participated. That this activity is still featured is emphasized by the fact that we now have approximately the same number of mills entered for the 1931 contest, started January 1, as we did in 1930, and all of this in face of the industrial readjustment period through which we are passing."

The attention of the meeting is particularly called to data of contests supplied by Mr. Costigan and Mr. Burns, respectively. Ontario reduced mill accidents from 2.63 days lost per employe to 1.66 days, at the same time increasing the number of employes by 2200.

To conclude, I would advocate annual competition, with a suitable award to be given to the safest mill, the competition to be based on hours of exposure.

#### Westminster Paper Earnings Are Good

Officials of Westminster Paper Company, New Westminster, B. C., report that interest for the full year ending July 31, 1931, on the \$300,000 issue of 6½% first mortgage debenture bonds was earned in the first three months of operation.

The new plant, which replaced the one destroyed by fire, went into operation last June and has operated on full schedules since that time. Several new units of equipment are to be added during the present year, and a color press will be installed during the coming summer, it is announced.

Efforts are being made to build up the company's export business, and President J. J. Herb is now in the Orient looking for new market connections for the specialties manufactured by his company.

Among the interesting shipments made by the company this year was a trial consignment of citrus fruit wrappers for Rhodesia, and it is hoped that this may develop into an important trade.

The company reports satisfactory results with its de-inking process by means of which old newspapers are salvaged, the ink removed, and the pulp used in the manufacture of paper specialties.

#### B. C. Timber Royalties Reduced

The British Columbia government brought down legislation reducing timber royalty charges and forestalling the arbitrary increase in rates that would have become effective at the beginning of next year.

The royalty was reduced from 75 to 60 cents a thousand on No. 3 grade coast logs, on coast hemlock and balsam fir, and all varieties of interior logs.

Representatives of the B. C. Loggers Association urged the government to bring about these reductions so as to curtail the cost of operation.

Prominent timber holders told the government that timber in the Pacific Northwest was no longer regarded as a first class investment owing to the decline in consumption and the increasing use of lumber substitutes.

Royalty relief to enable export of small timber as cordwood for use in the pulp and paper industry was urged by some members of the legislature, and this was met in part by the action by the government.

#### European Pulpwood Prices Very Low

The pulpwood situation in Europe is still generally unsatisfactory, with supply exceeding demand to such an extent that there is a continued pressure on prices, according to a recent report from Commercial Attache Marquard H. Lund, Oslo. No remedy has been suggested other than a decrease in cutting, which is not only difficult to carry out but would be rather ineffective this year because of the tremendous windfall in several countries. Prices at present are at lower levels than for many years.



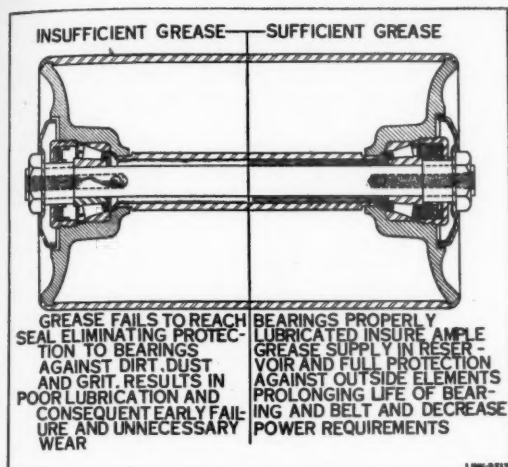


Figure 1—How to lubricate idlers.

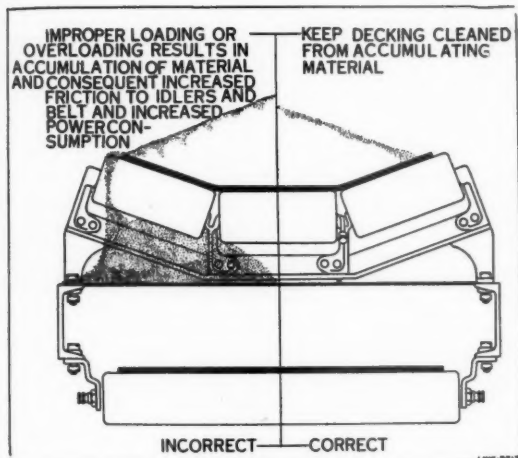


Figure 2—How to keep idlers clean.

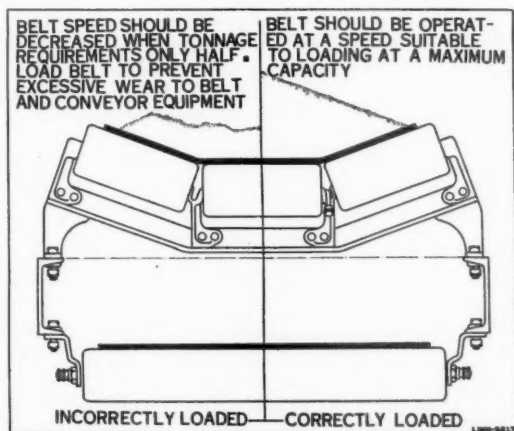


Figure 3—How to load conveyor.

# How to Increase Belt Conveyor Life

By W. E. PHILIPS, Engineer,  
Link-Belt Company



Five simple things materially increase the life of the average belt conveyor installation. This statement is based on the assumption that when the conveyor was originally installed the idlers were lined up square with the belt; that an experienced engineer's advice was taken when determining on the belt design for the material to be handled; and that the belt was lined up correctly with the idlers.

Even though the original installation was correctly engineered, it requires some attention, to get the best results afterward, just as an automobile does if the utmost satisfaction is desired.

The five things to which I refer are:

1. **Lubrication.** Sufficient greasing with the proper kind of grease, although infrequently needed. Fig. 1.

2. **Cleanliness.** Keep the space under the belt clean. Clean the decking when material overflows and threatens to clog the idlers. Clogging increases the friction load, resulting in greater power consumption and wear on the driving mechanism as well as the idlers and belt. Fig. 2.

3. **Loading.** Do not overload. Use an idler sufficiently heavy, and a belt designed for the service expected. Have material reach the belt in the same direction the belt is moving and with as little impact as possible. Use feeders when necessary as they create a steady flow of material without shock to the conveyor. Fig. 3.

4. **Wear.** There are many reasons for uneven or premature wear on belts and idlers. Belts scraping against framework, skirtboards, or wedged material are the chief causes. Dragging idlers, caused by insufficient lubrication, or clogged rolls, cause undue wear on both the belt and idler, and put an extra load on the driving mechanism.

5. **Training the Belt.** Train the belt while empty, then if it runs out of line when loaded it is because of unequal loading. Fix the loading chute or install a feeder. Adjustment cannot be made by taking up the take-ups on one side or the other. See that the belt contacts the center roll of the idler because this roll steers the belt. Foundations for the idler should be firm and secure. Side, or guide idlers, should not be used when training the belt. Do not increase belt tension as this will injure the belt without obtaining the desired results.

# T-R-A-D-E - T-A-L-K

Devoted to the Paper Trade of the Western States

## Getting All Set for Del Monte

The fourteenth annual meeting of the Pacific States Paper Trade Association will be held at the Hotel Del Monte, Del Monte, California, Wednesday evening, May 13, to Saturday, May 16, inclusive.

The customary procedure will be followed, of dividing the time between business sessions and the usual golf tournament, the qualifying round of which, how-



E. A. DORAN  
President  
Pacific States  
Paper Trade  
Association

ever, will take place on Tuesday morning, May 12. This will be the thirteenth annual golf tournament of the Pacific Coast Paper Manufacturers. The committee will later give full particulars concerning it.

The joint meeting of merchants and manufacturers, which has become an established feature of the meetings, will be held on Wednesday evening, May 13. The mutual benefits derived from this contact is well recognized and it is expected that a large number will take this opportunity to exchange ideas for the betterment of the industry.

Ample provisions have been made for recreation and for the entertainment of the ladies, who are always welcome.

The annual dinner-dance of the association will take place on Friday evening, May 15, and the annual golf banquet and award of prizes on Saturday evening, May 16.

President E. A. Doran of the association is urging a large and representative attendance this year because of the number and diversity of the problems encountered by the trade within the past year when business has been—well, not so hot.

Augustus Johnson, who sells paper for the Everett Pulp & Paper Company in and about San Francisco when not serving on the convention golf tournament committee, is again chairman of that activity. He has been actively soliciting entries and promises good golf weather.

This year the manufacturers are expected to be more in attendance than usual. For years they have come in

a detached capacity, but this year they will have a meeting of their own to further perfect the Pacific Coast Association of Pulp and Paper Manufacturers which sprang into official life at a meeting held in Portland last year.

## Sees Upturn in Paper Trade

Merchandise inventories have been pretty well liquidated and any increase in demand should be immediately reflected in increased orders to the manufacturer. This is an analysis of present conditions in the paper trade made by H. L. Zellerbach, president of the Zellerbach Paper Company, upon his recent return from New York City and other eastern points where he talked with many jobbers and others identified with the paper industry.

"I found everyone looking forward to 1931 with hopeful anticipation," said Mr. Zellerbach, "All look forward to a very definite improvement in demand, and, while it may be gradual, it will nevertheless be definite."

## Zellerbach Opens Yakima Distributing Branch

A. W. Akers, manager of the Seattle branch of the Zellerbach Paper Company, division of the Crown Zellerbach Corporation, spent several days in Yakima, Washington's famous apple city, late in March. As a result of this visit there remains to be posted in the journal under "Results Accomplished" the opening of a branch of the Zellerbach Paper Company at 113 North Second avenue.

The branch is under the direction of Warren Davis, who has represented the company in the district for the past six months.

## Glacier Bond Distributed by B. M. & T.

"White as the snow that blankets the country side" is the apt description given to Glacier Bond, product of Neenah Paper Company, Neenah, Wisconsin, and distributed by Blake, Moffitt & Towne thru its 16 Coast branches. The sheet is advocated for those who want economy and yet demand a rag-content paper of quality.

## Dixon Handling Velour Folding Enamel

The Dixon Paper Company, operating in Denver and Salt Lake City has taken on the Velour folding enamel line put out by the Allied Paper Mills at Kalamazoo. The folding enamel comes in white and six colors in high, dull or embossed finish.

## National Secretary Floyd Passes

Frank E. Floyd, secretary of the National Paper Trade Association of the United States, died on March 26 at Indianapolis. A. H. Chamberlain, assistant secretary of the National Paper Trade Association is temporarily in charge.

C. P. Sheldon, assistant sales manager of the Northwest Paper Company, was a visitor in San Francisco and Los Angeles in March.

### New Southern California Distributors

Capitalized for 500 shares of stock, no par value, California Paper House, Ltd., 634 Third Street, San Diego, is Southern California's newest paper house.

Incorporators are Julian F. Weir, for the past seven or eight years General Paper Company representative in San Diego, but who has now severed his connection with that company; William H. Clark, Zellerbach Paper Company representative in San Diego for the past fifteen years; and I. R. Heller, Los Angeles capitalist.

Just what the immediate plans are or the lines they are going to handle was not learned at this time.

### Everett's Blackstone Text

Reminiscent of pioneer days, when ox teams, prairie schooner, and buffalo hunter were common sights, is the attractive broadside recently sent out by the Everett Pulp & Paper Company, manufacturers of book paper at Everett, Washington, to illustrate "Blackstone Text". It is a superior eggshell paper with uniform finish on both sides of the sheet. Colors in white or India.

### Mrs. Tompkins Inaugurates Her Own Service

Women have entered every phase of modern industry; they have soared more than six miles above the earth in airplanes, and they have promoted prize fights, but it remained for Nancy Baker Tompkins of Los Angeles to become what is said to be the world's first woman paper mill representative.

Mrs. Tompkins will open an office May 1, at 816 Bendix Building, Los Angeles, as the representative of several well known Eastern paper mills. She will sever



NANCY BAKER TOMPKINS

Organizes  
Advisory Service  
for Paper Users

her connections with the Zellerbach Paper Company, Los Angeles, where for the past five years she has held the position of director of the advisory department, fine paper sales.

Mrs. Tompkins began her career with Harry Linder-meyer & Sons, New York City, one of the oldest and most substantial paper houses in that city.

"Nancy Baker Tompkins Advisory Service for Paper Users" will be the name of the new concern, and Mrs. Tompkins will offer the same services to paper users that she has in the past with the Zellerbach Paper Co.

Mrs. Tompkins is past president of the Los Angeles Advertising Association; Los Angeles Chairman of Direct Mail Leader Exhibit; Chairman of Paper & Ink Group of Direct Mail Department of the Advertising Club of Los Angeles; and member of the Speakers Bureau of the Advertising Club of Los Angeles.

### Beckwith Becomes Carter-Rice Director

Indicative of the importance the well known paper distributing firm of Carter, Rice & Company attach to the Pacific Coast, as well as the personal worth of the individual, is the unanimous election of Charles H. Beckwith to the corporation's board of directors.

Mr. Beckwith really got into the paper business following the termination of the World War. He joined the staff of Carter, Rice & Company in the home office at Boston and specialized in fine papers. A few years



CHARLES H. BECKWITH

Elected to  
the directorate of  
CARTER, RICE & CO.

ago he was transferred to the Pacific Coast and established headquarters in Seattle. Recently he transferred his offices from Seattle to San Francisco, the better to be able to direct the Coast wide affairs of Carter, Rice & Company, over which he had direct charge. His election to the directorate came soon after his transfer to San Francisco.

"I feel this expression of confidence on the part of the other directors as a distinct compliment, to the company's entire Pacific Coast organization as well as to myself," said Mr. Beckwith upon being advised of his election. "It is undoubtedly an indication of the importance which the company attaches to its Pacific Coast Divisions."

Carter, Rice & Company operate branches at San Francisco, Portland, and Seattle.

### New Sealright Factory at Los Angeles

The Sealright Pacific Company, manufacturers of milk bottle caps and food containers, will establish a factory in Los Angeles, according to an announcement. A new building in the Hostetter industrial district, nearing completion, will provide 9,000 square feet of manufacturing space and general offices of the company. The Sealright Pacific Company is the western division of the Sealright Company of Fulton, New York. Formerly the western company acted merely as a sales force for the parent company, but owing to the increasing importance of the western market it was decided to establish a factory in the West.

For the present manufacturing activities in Los Angeles will be confined to milk bottle caps. These caps with a patented cut groove to make them easy to lift are already extensively used on this coast. The new factory will serve the entire eleven western states. Sales of other products of the parent company will also be handled through the local factory. Extensive specially built machinery is now being installed and it is expected that the new plant will be ready for operation by June first.



*New Types  
New Models  
New Machines*

## EQUIPMENT

Manufacturers of, and dealers in, equipment used by pulp and paper mills, board manufacturers, converting plants, paper merchants, or any other branch of the industry may make their announcements in this department.

*New Dealers  
New Branches  
Appointments*

### Union Screen Plate Executive On Coast

L. Vincent Welch, vice-president of the Union Screen Plate Company of Fitchburg, Massachusetts and Lennoxville, Quebec, spent several weeks on the Pacific Coast during March and April calling on all his friends of many years standing. Mr. Welch has been making periodical trips to the Pacific Coast for 30 years and is well acquainted with a large number of Coast mill men. His trip this time began with a journey across Canada



L. VINCENT WELCH  
Vice-President  
Union Screen Plate Co.

to Powell River, B. C.. From there he is working South visiting practically all the mills. While on the Coast Mr. Welch spent sometime with William Weill, Seattle, manager of the Pacific Coast Supply Company, agents for the Union Screen Plate Company.

### John Waldron Corporation Makes Oneida Chuck

The Oneida Chuck is the newest addition to the extensive line of products of the John Waldron Corporation of New Brunswick, N. J., who for over a century have been engaged in the manufacture of paper converting machinery.

The Oneida Chuck is a new roll collar designed for use with paper cores or rolls without cores. It replaces heavy iron cores with non-returnable paper cores. Mills no longer need to stock cores in all sizes and safe running down of roll to last thickness of paper is now made possible by this new chuck.

E. G. Drew is the Pacific Coast manager for the Waldron Corporation and maintains offices at 311 Lewis Building, Portland, Oregon.

### Trayco Conveyanscreen

The Traylor Vibrator Company, of Denver, Colorado, announced some time ago the development of the "Trayco Conveyanscreen" which brings a number of new and interesting practices to the art of screening.

The power unit, designated as the vibrator unit, is mounted above the screen sash and imparts its vibration at an angle to the screening plane. This rapid oscillation produces a sharp screening action as well as a conveying motion. Thus, the screen can be operated prac-

tically flat and, therefore, does away with the necessity of setting the screen at an angle where gravity will cause the flow of the material across its surface.

The manufacturer states the Conveyanscreen produces more accurate sizing because the angle of vibration causes the material to keep in closer contact with the screen cloth. The power units which vibrate the sash are the same type and design as those used on Traylor vibrating conveyors which have been in use in conveying practice a number of years.

The vibrator is suspended so that all the vibration is absorbed within the unit and none is transmitted to building supports. The power unit takes its energy from any standard alternating current and thru the use of a small motor generator set, furnished with the screen, the intensity of the vibration is under rheostat control and can be varied to meet individual requirements.

The screen is furnished in four standard widths and in any length necessary to accomplish the duty. On single and double deck screens, up to six feet in length, one vibrator is used. On screens over six feet long and up to twelve feet in length two vibrators are used. On screens over twelve feet in length, three or more vibrators are used to oscillate the screen sash.

The steel sash of the screen, over which the screen cloth is tightly stretched, is vibrated as a unit. All cross ribs, for the support of the screen cloth, are equipped with specially moulded rubber strips which protect and prolong the life of the screen cloth. A complete renewal of cloth can be made without special tools in ten minutes. The manufacturers bulletin giving further details of the Conveyanscreen is designate as "No. S-102."

### Puget Sound Company Re-elects All Executives

At the annual meeting of the Puget Sound Pulp & Timber Company held on March 17 all officers and directors were re-elected. They are: Ossian Anderson, Everett, president; P. F. Knight, Clearlake, first vice-president; William Morrison, Bellingham, second vice-president; H. R. Lawton, Seattle, secretary, and L. C. Peppell, Everett, treasurer. The directorate includes Mr. Anderson, Mr. Knight, Mr. Morrison, Mr. Lawton; Neil W. Winter, Medina, U. M. Dickie, Seattle; R. H. Miller, Seattle; O. M. Green, Olympia; Peter G. Schmidt, Seattle; Harry M. Robbins, Seattle, and H. W. Bunker, San Francisco.

### Hawley Passes Preferred Dividend

Hawley Pulp & Paper Company, Oregon City, Oregon, in its annual report issued to stockholders showed a gain in earnings during the year 1930 compared with the preceding year. The company was also able during the year to increase its earned surplus and improve its ratio of current assets to current liabilities.

The showing made by the company in a year of pronounced depression in the paper industry was considered exceptionally good.

Operations for the year ending December 31, 1930, resulted in a net profit of \$177,348 before first preferred stock dividend requirements, compared with net profit



of \$148,603 for the year 1929. After payment of \$140,000 in regular dividends on the 20,000 shares of \$7 cumulative first preferred stock outstanding the company's earned surplus was increased to \$229,272 at the end of the year from \$215,673 at the close of 1929.

The company reported as of December 31, 1930, current assets of \$1,220,113 and current liabilities of \$569,422, a ratio of 2.14 to 1. At the close of 1929 the company's current assets were \$1,149,320 and liabilities \$615,434, a ratio of 1.86 to 1.

A letter sent out to stockholders in connection with the report announced the deferring of the dividend on the first preferred stock normally due April 1.

"Owing to an excessive inventory of finished paper on hand, production during the first two and one-half months of 1931 has been curtailed to approximately 52 per cent of capacity," said the letter, which was signed by Mr. Griffiths. "Due to this severe curtailment, operations for this period have been conducted at a loss with no immediate prospects of improvement."

"In order to conserve the present cash position of your company and to provide the necessary funds for bond retirement on July 1, 1931, of \$135,000 as required by the provisions of the trust deed, it was thought advisable by the board of directors of your company to take this action."

Blyth & Company secured control of the Hawley Pulp & Paper Company during 1929.

#### St. Helens Mill Passes April Dividend

Holders of St. Helens Pulp & Paper Company common received empty envelopes instead of the anticipated 20c per share anticipated as the April 1 quarterly dividend. The popular explanation of the dividend omission is a desire on the part of the company to conserve cash.

The balance sheet, as of December 31, 1930 showed \$497,920 of cash and securities against \$427,098 of current liabilities. Quick assets at end of 1929 were \$1,030,265. Last year St. Helens made gross profit of \$530,267 before depreciation, taxes, discounts and bond interest. These deductions, including \$134,486 for depreciation, gave a net for year of \$287,314, which, after \$158,365 of dividends, increased surplus from \$858,092 to \$1,016,458.

The St. Helens Pulp & Paper Company is at present adding a second paper machine to make kraft specialty items. The mill has a daily rated capacity in excess of 60 tons of finished paper. It makes bag and wrapping papers, but within the past year has been stressing specialties, particularly bleached and semi-bleached items.

Max Oberdorfer is president and general manager.

#### Pacific Coast Paper Mills Elects

Directors were elected and purchase of a new folding equipment was authorized at the annual meeting of the stockholders of the Pacific Coast Paper Mills, Bellingham, Washington last month.

The by-laws were amended to permit an increase of two in the directorate and new members elected under that authority were William McCush, Bellingham, and John D. Watson, of Appleton, Wisconsin. The other directors, who were re-elected, are H. M. Lord and Elmer Herb, New Westminster, B. C.; J. J. Herb, Paul Herb and G. H. Bacon, Bellingham.

The following officers were elected by the new board: J. J. Herb, president; Paul Herb, vice president; V. A. Hughes, secretary; William McCush, treasurer. The only new officer is Mr. McCush. Paul Herb was formerly treasurer.

#### R. B. Wolf to Manage Weyerhaeuser Pulp

The much debated question of who would manage the new mill has been set at rest with the appointment of Robert B. Wolf as manager of the Pulp Division of the Weyerhaeuser Timber Company. Mr. Wolf will not only operate the new 150-ton bleached sulphite mill now under construction at Longview, Washington, but will be in charge of marketing the product.

Of Mr. Wolf it can truly be said that he is well known in the pulp and paper industry. Born in 1877 in New Jersey, educated in electrical and mechanical engineering lines, he entered the pulp and paper field in 1896 unobtrusively as a workman, those being the days when college diplomas were sometimes more of a handicap than an advantage in building welcome among the men in the mill.

His subsequent years were spent as superintendent of the Piercefield, N. Y. sulphite mill of the International Paper Company; supervisor of design, construction and operation of Union Bag & Paper Corporation's mill at Hudsons Falls, N. Y.; manager of the Burgess Sulphite Fibre Company (now Brown Company) of Berlin, N. H., from 1906 to 1917; general manager of the three mills of the Spanish River Pulp & Paper Company of Sault Ste. Marie, Ontario.

Mr. Wolf is a thoro believer in technical control of operations in manufacture and is known as a pioneer of scientific methods in the pulp and paper industry and in the development of bleaching methods. He has always been intensely interested in the human side of management problems and has made a number of contributions to both technical and philosophical literature.

Following service with the Emergency Fleet Corporation during the World War, Mr. Wolf organized the engineering firm now known as Wolf & Hill. The Pulp Bleaching Corporation, New York, was organized in 1925; the International Bleaching Corporation of Delaware was organized in 1926; Pulp Bleaching Limited, Montreal, Canada, was organized in 1927.

Upon assuming his new duties with the Weyerhaeuser company to which he will devote his principal energies, Mr. Wolf resigned as president of the Pulp Bleaching Corporation, New York. He is succeeded in that position by Raymond P. Hill, who is also president of the Canadian company and secretary-treasurer of International Bleaching Corporation, Delaware.

Mr. Hill has been in the pulp and paper industry for 18 years. He has been vice-president and manager of the Pulp Bleaching Corporation since organization. Raymond S. Hatch succeeds Mr. Hill as vice-president of the New York company. He is also vice-president of the Canadian company, and technical director of the International company. Mr. Wolf remains president of the International Bleaching Corporation, this being purely a research institution, which has no commercial dealings with the trade in North America. James F. Smith now becomes secretary-treasurer of both the American and Canadian companies.

#### Paper Makers Chemical Corporation Acquires

The Paper Makers Chemical Corporation announced on April 1 having acquired the business and chemical manufacturing properties of the Georgia-Louisiana Corporation at Atlanta, Georgia, and Marrero, Louisiana.

Operations in the future will be carried on under the name of Paper Makers Chemical Corporation.

The combined personnel, manufacturing and research facilities are at the service of the paper industry.

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*another notable installation of*

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*Aerial view of the Crown-Willamette Paper Company's mill at Camas, Wash. Engineers: V. D. Simons, Chicago.*

# *for* Crown Willamette

From the raw materials to a wide variety of complete consumers products is the notable manufacturing achievement made possible by the new facilities and equipment of the Crown-Willamette Paper Company mill at Camas, Washington. Production capacity is now around 400 tons per day devoted largely to the manufacture of the widely advertised Zee and Zalo tissues, fancy sulphate and kraft wrapping papers, towels and napkins. This is one of the largest single mills operating on the Pacific Coast and recent additions represent one of the most noteworthy developments in the entire industry.

Prominent among the many extensive additions to buildings and equipment are the three new paper machines, including the new No. 10 Yankee machine and the new bleaching system. To assure proper handling of the important ventilating and exhaust requirements in connection with the new equipment, Ross apparatus was specified — adding another notable Ross installation to an already impressive list.

Equipment designed and installed by Ross engineers in the Camas mill includes Heating and Ventilating apparatus, Calender Cooling and Exhaust Systems and supplementary

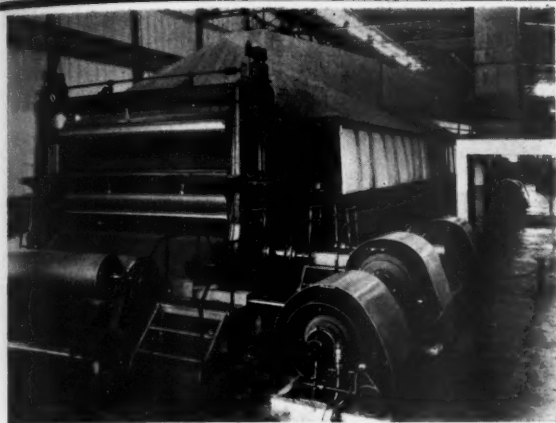
J. O. ROSS ENGINEERING CORPORATION

**ROSS SYSTEMS — ROSS**

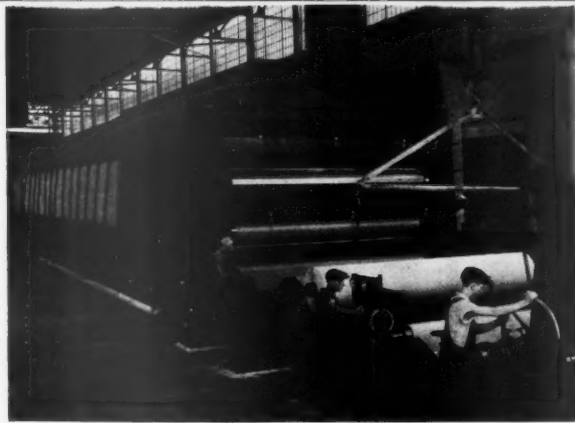
IN CANADA — ROSS ENGINEERING OF

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# ROSS EQUIPMENT



*The Ross Ventilating and Exhaust System on the new No. 11 paper machine.*



*Another view of the No. 11 machine showing the Ross System of Exhaust and Ventilation.*

## Paper Co.

heating equipment for converting buildings. It is significant that practically the same type of Ross equipment that was previously supplied for the older machines in this mill was again specified for the new machines with a specially constructed hood and exhaust system for the new Yankee machine. A complete modern exhaust system was supplied to fully meet the requirements in the new bleach room. In fact, this extensive and noteworthy new development at Camas, Washington, furnishes another outstanding example of the important part that Ross equipment plays in the most prominent mills—from Coast to Coast.

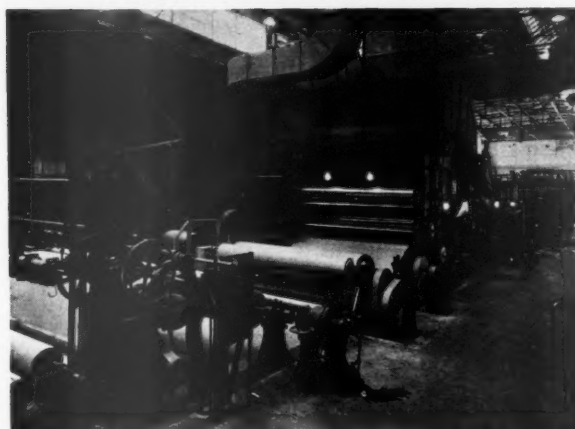
Chicago  
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New York  
N. Y.

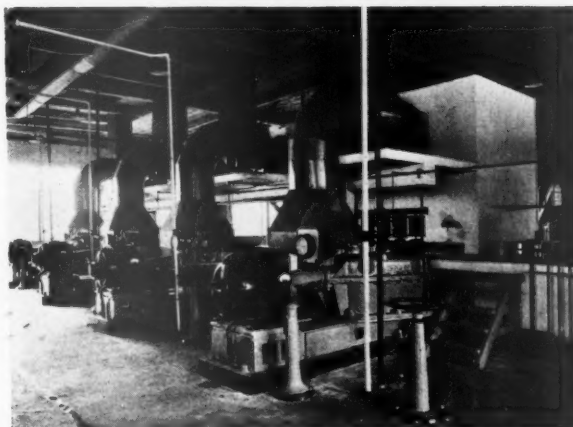
Portland  
Ore.

## SYSTEMS

CANADA LIMITED



*The Ross Ventilating System on the new No. 10 Yankee machine in the Camas mill.*



*Showing the Ross Exhaust System installed in the new Bleach plant.*



### Canadian News Print Mergers Still Loom

Speculation continues concerning the proposed merger of some of the larger eastern Canadian newsprint companies. It appears to be inevitable, that some plan will be worked out whereby the higher cost mills may be eliminated from the production picture, at least temporarily, and the low cost mills associated in an enterprise that will be in a position to dictate its own terms regarding newsprint prices.

Inasmuch as the new consolidation will be little short of an absolute monopoly of the eastern newsprint business there is a tendency among Coast paper executives to discount reports intimating that the Backus-Brooks or some other United States mill will be in the merger, for in that event the new corporation's activity would be handicapped in the United States by the Sherman Anti-Trust Law.

Several conferences have taken place between representatives of the Canadian International Paper Company, Abitibi Power & Paper Company and the Canadian Power & Paper Company regarding possible consolidation, and the Minnesota & Ontario Paper Company has been reported in the negotiations too. Canadian International's status is said to be different from the M & O's by reason of the fact that, while controlled by American capital, its direction and management is entirely centered in Canada. Such is not the case with the M. & O.

St. Lawrence Corporation and Price Brothers and Company have also been referred to as likely members of the proposed consolidation. It is said that the proposed fusion does not include any public utility properties controlled by these companies apart from the paper making units.

The Abitibi Power & Paper Company, whose assets are about \$154,000,000, has extensive paper and pulp operations in Ontario and Quebec, with wood reserves in excess of 50,000,000 cords. It is controlled substantially by Canadian interests and has strong United States banking connections.

The Minnesota and Ontario Paper Company, controlled by the Backus-Brooks Company of Minneapolis, has assets approximating \$92,000,000, operating principally in Western Ontario, where forest area of more than 50,000 square miles of paper-making woods is immediately tributary to its properties.

The St. Lawrence Corporation, Ltd., in which the Dominion Securities Corporation is interested, has assets of \$68,000,000, with operating subsidiaries in several sections of Quebec.

Canada Power & Paper, which controls the Laurentide Company, Ltd.; St. Maurice Valley Corporation and other Quebec paper companies, with 80,000,000 cords of pulpwood reserves, has assets of \$190,000,000, and is controlled by Sir Herbert S. Holt and associates.

Price Brothers & Company, with assets of around \$71,000,000, also has paper properties in Quebec, with pulpwood reserves of 47,000,000 cords, and is owned by the Price family and associates.

### Russian Wood Setting Higher Standards

Russian pulpwood will force Canadian pulpwood out of the eastern United States market unless the quality of the Canadian product is improved, according to G. C. Piche, chief of the forest service department of the province of Quebec. Eastern Canadian pulpwood, says Mr. Piche, is not always of the highest quality. The high standard maintained by Russian pulpwood exporters has made American buyers more critical than ever, says Mr. Piche.

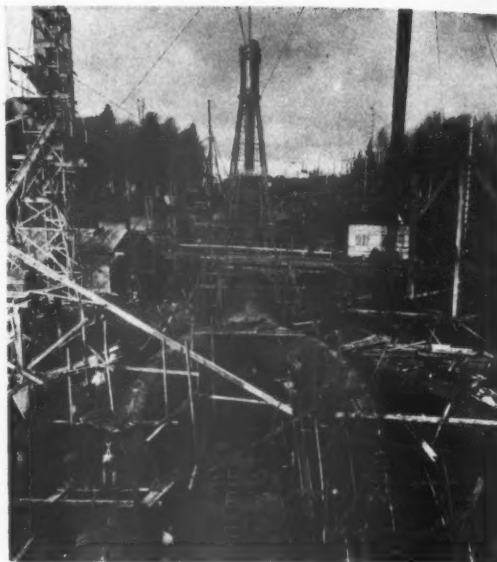


Illustration by courtesy of Powell River Digester

Looking up from the new Stillwater power house at the steel penstock "Y" on Powell River Company's Lois River hydro-electric development. The penstock has since been encased in concrete.

### Powell River Cuts In Lois River Power

Powell River Company, British Columbia's premier news print producer, started making use of Lois River power for the first time late in March and will continue to do so, altho probably at considerably less than capacity for several months.

The company's \$10,000,000 extension job is now considered complete. The new power from Lois River is generated at Stillwater and transmitted by overhead high tension lines to the mill, where the new 226-inch No. 7 machine has been turning out its quota of paper since the beginning of the year.

### Powell River Gets Direct Phone Service

Laying of a submarine cable between Powell River and Cape Lazo, Vancouver Island, provided the last link in a direct telephone connection between offices of the Powell River Company and the outside world.

The cable, 22 miles long and gutta percha covered, was laid late in March and was soon in service, so that officials of the company at Vancouver head office were able to communicate with the mill without delay. Before the cable was laid the company was dependent on a radio telephone service which was first put in use last winter.

### Rainier Taxes Big Item to Mason County

The Rainier Pulp & Paper Company, operating a 175-ton bleached sulphite pulp mill at Shelton, Washington, paid taxes amounting to \$34,450 for 1930, indicating that this concern pays about a thirteenth of the whole tax bill of Mason county. Other large taxpayers included Simpson Logging Company, \$50,000; Phoenix Logging Company, \$29,000; Peninsular Railway Company, \$8,000; Weyerhaeuser Timber Co., \$11,852; Weyerhaeuser Logged Off Land Co., \$7,000. Several of the once large timber and logging companies are now listed among the smaller allotments to Mason county.



### Leadbetter Mill Earnings Are Lower

Gross earnings of the Oregon Pulp & Paper Company, Salem, Oregon, were somewhat lower in 1930 than in 1929 according to figures released by Frederick W. Leadbetter, president. The Columbia River Paper Mills at Vancouver, Washington, affiliated with the Salem mill through the Columbia River Paper Company, a holding concern in which control is held by the Leadbetter interests, show a substantially lower gross profit than in 1929, the decline being attributed to the lower market price which continued through 1930. Both mills, however, operated steadily and during 1930, the Oregon Pulp & Paper Company retired \$50,000 of its series A, first mortgage bonds, and \$20,000 of its series B, mortgage bonds.

Gross earnings of the Salem mill in 1930, before depreciation, bond interest and federal taxes, were \$374,748 in 1930, \$611,354 in 1929, and \$775,652 in 1928.

Gross earnings on the Vancouver mill, before depreciation, bond interest and federal taxes, were \$490,628. This compared to \$514,920 in 1929 and \$62,209 in 1928.

On the Oregon Pulp & Paper Company operations the company set up a depreciation reserve of \$203,825 and paid in interest on outstanding bonds \$70,400.

On the Columbia River Paper Mills the company set up a depreciation reserve of \$168,370, and paid interest of \$52,800 on bonds outstanding.

A summary of the balance sheets of both companies at the close of business in 1930, was:

	Ore. Pulp and Paper	Col. Riv. Paper Mills
Plant .....	\$4,251,102	\$3,385,273
Dep. res. ....	1,052,116	811,735
Net Fixed assets .....	3,198,986	2,573,538
Investments .....	24,500	1,438,355
Current assets .....	1,002,624	794,239
Current liability .....	616,176	304,220
Working capital .....	386,448	490,019
Advances .....		328,286
Surplus .....	514,335	1,282,538
Capitalization—		
Total assets .....	5,130,757	6,029,559
6% 1st mortgage bond .....	1,150,000	880,000
8% par cum. pfd. ....	800,000	750,000
Common, par .....	1,296,700	2,000,000

### Better Attention to Heating and Ventilating

It has been extremely noticeable that the subject of heating and ventilating for paper mills is being given the utmost attention throughout the entire industry. New mills and additions to present mills are being planned to include necessary equipment for the reclamation and utilization of waste heat, drying equipment that will materially speed up drying operations and provide a more uniform drying surface thereby insuring a finer finished product.

Older mills throughout the industry, realizing the decided operating advantages being secured by their more modern brethren are installing necessary equipment to insure equal savings and production advantages. Ross apparatus for heating, ventilating and drying have been installed in many mills within the past few months.

Of the many Pacific Coast installations, those made by the J. O. Ross Engineering Corporation in the big newsprint mill at Powell River, B. C., and the specialty paper mill of the Crown Willamette Paper Company at Camas, Washington, are particularly interesting.

### B. C. Pulp Earnings Slightly Better

Earnings of B. C. Pulp & Paper Company, which operates sulphite pulp mills at Woodfibre and Port Alice, B. C., were on a higher basis last year than in 1929, according to the annual report issued recently by President Lawrence W. Killam.

Mr. Killam remarked on the fact that results during the early part of the year were chiefly responsible for the comparatively good showing. He declined to make any predictions on the trend of the pulp industry in the future. "With the pulp business in its present uncertain state", he told PACIFIC PULP & PAPER INDUSTRY, "this is no time for prophesy."

The company's annual meeting was held in Vancouver, B. C., on March 26.

General depression in the newsprint business, which has had an unfavorable influence on the pulp market, has made continuous operation very difficult, Mr. Killam told the shareholders. The effect of the recent universal price reductions was reflected in the company's balance sheet.

A summary of the report follows:

Profits on operations before interest on bonded debt and provision for depreciation and income taxes amounted to \$671,903 compared with \$599,776 in 1929.

Bond interest at \$316,585 was approximately \$5,000 less than the previous year.

Provision for depreciation amounted to \$300,000, whereas in 1929 the allowance for this purpose was \$80,000 less. Thus although earnings were higher, net profit is shown at \$41,216, approximately the same as for 1929.

Surplus as at December 31, 1929, amounted to \$56,158 so that after dividends of \$38,934 on preferred shares the balance at December 31, 1930, amounted to \$58,439.

The balance sheet shows current assets at \$1,567,815 to be \$1,289,080 in excess of current liabilities. Inventories at \$1,060,254 are not greatly in excess of the total for 1929, which was \$973,344. These figures include manufactured products, pulp in process, logs and materials and supplies on hand and in transit. Mr. Killam points out that inventories have been valued conservatively and states that properties have been well maintained. Additions to property account during the year amounted to \$173,539.

The balance sheet places assets after depreciation and reserve for depletion of timber limits at \$7,217,257 compared with \$7,348,155 at the end of 1929.

The additions to property account are represented by the company's new barking and chipping plant at Port Alice, which is expected to reduce the consumption of logs by about 20 per cent.

### B. C. Pulp's Log Barker

W. H. Wharton, in charge of barker installations for the Canadian Allis-Chalmers Company, has been inspecting the job done by that company for the B. C. Pulp & Paper Company at Port Alice, B. C.

The barker is now in operation on a part time basis while minor adjustments are being made. The plant has been generally satisfactory, according to President L. W. Killam, although some changes have to be made in the installation of the conveyors—an operation which is now being carried out.

The new chipping plant put in by B. C. Pulp & Paper Company has been operating since early in the year, and is now taking logs from the big barker, the largest of its kind in the world. The entire installation cost more than \$100,000.



# Are You Getting Ready?

## Good times are coming in the paper industry

Regardless of present conditions, this country will sooner or later enjoy the greatest business expansion ever known.

When the great production race starts, it will be paper mill against paper mill as never before. Then the companies whose mills are equipped with the most thoroughly modernized machinery will be the ones to profit most fully.

With this thought in mind, foresighted paper manufacturers are checking over every piece of equipment now—asking themselves many questions about it.

Is this paper machine obsolescent to the point where it should be replaced with a modern machine of greater capacity?

Has that dryer depreciated to a degree that threatens quality, or that is likely

to cause delays resulting in the disruption of the entire production schedule?

Is this Jordan costing too much for power, lubrication and maintenance?

When the answer is "yes", it will pay you well to do some writing off and to make immediate replacements.

In making such replacements, remember that Timken Tapered Roller Bearings are revolutionizing operating and production costs in all types of paper mill machinery.

And remember that these savings are so great that it is not uncommon for Timken-equipped machinery to pay for itself in a few months.

Now is the time to put these substantial economies into effect.

When business shifts into high, will you be ready to hold the pace?

THE TIMKEN ROLLER BEARING COMPANY, CANTON, OHIO

# **TIMKEN** *Tapered Roller* **BEARINGS**

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### Pulp-Paper Carloadings Up for Second Quarter

Things are looking up a bit in the pulp and paper industry in the Pacific Northwest, if one may judge by the prospective freight car loadings as estimated by the Paper, Paper Products, and Pulp Committee of the Pacific Northwest Advisory Board of the American Railway Association. C. B. Richards of the Hawley Pulp & Paper Company, Oregon City, is committee chairman, and W. A. Brazeau of the Inland Empire Paper Company, Millwood, is vice-chairman. Their report is as follows:

The prospective car requirements for the second quarter of 1931 reflect an increase of 9.9% over the actual loadings for the same period of 1930.

During the past few weeks there has been a slight increase in the movement of paper and paper products to transcontinental territory, while the local movement has shown little, if any, increase. However, the increase in prospective loadings for the second quarter may be an indication of an upward trend in the paper industry, which will affect local as well as long-haul movement.

The actual loading for 1930 and the prospective loading for 1931 is as follows:

	Actual Loading 1930	Prospective Loading 1931
April .....	757	832
May .....	753	827
June .....	683	751
Total .....	2193	2410

### Pulp Executive Boosting Scenic Highway

To open up by means of a mountain loop highway and preserve perpetually for the recreation of the public a virgin area of forest land lavishly endowed with scenic splendor, a committee of Everett, Washington, business men are working vigorously on a project to put thru a loop highway that will circle the famed Monte Cristo country.

C. E. Ridgeway, assistant secretary of the Puget Sound Pulp & Timber Company, is on the committee and an enthusiast for the program. To get straightened on certain preliminaries Mr. Ridgeway and several members of the committee made a quick trip to Portland last month to confer with the district offices there of the U. S. Forest Service. They found everything favorable.

No opposition to the plan has developed, the main work being to bring the project to the fore and to start action. The only difficulties involved so far have been in assuring the preservation of certain tracts of timber bordering the proposed highway which are being coveted by logging interests with no eye to natural grandeur.

Back of the whole project is a plan to reserve a vast mountainous country in the Cascades centering on Glacier Peak, a beautiful but little known and presently quite inaccessible mountain. The area has untold advantages for a great public playground easily reached by motor from the population centers on Puget Sound.

### Japanese Business on Upgrade

There is no doubt that the corner has been turned in Japan and providing the political situation continues satisfactory business should swing upward. Conditions in the paper market are infinitely better than they were four months ago and stocks are rapidly diminishing. Prices have been raised three times from the lowest level and the associated paper makers are now considering whether it is wise to continue the joint controlling

of goods in storage and also whether it is not advisable to lower the rate of restriction on output.

Pulp prices, however, continue weak due to the increasing quantities of American pulp coming into the market. This, however, is only a temporary factor. It is believed that, with steady sales of paper, pulp prices will firm up in the near future.

Chemical pulp imported by Japan during January, 1931, was as follows (amounts stated in pounds): Sweden, 1,470,133; Norway, 2,377,733; Germany, 1,726,133; Switzerland, 78,934; France, 122,800; Denmark, 82,400; U. S. A., 3,772,667; Canada, 10,705,600; total, 20,336,400.

The only imports of chemical pulp were 6,667 lbs. from the Straits Settlements.

### The Paper Industry in Japan Production and Sales January, 1931

	Production lbs.	Sales lbs.
Printing Paper (Superior Quality) ..	11,994,730	13,686,297
Printing Paper .....	8,383,484	9,007,114
Writing Paper .....	4,057,188	3,706,113
Simili Paper .....	9,213,923	9,939,022
Art Paper .....	1,212,269	1,111,939
News Printing Paper ..	44,818,897	46,674,123
Sulphite Paper .....	3,644,200	4,709,816
Colored Paper .....	821,166	1,153,040
Wrapping Paper .....	10,916,680	11,154,273
Chinese Paper .....	1,855,430	2,012,072
Board Paper .....	6,009,086	5,832,175
Sundries .....	5,626,953	4,858,262
Total .....	108,554,006	113,844,246

### Spaulding Mill Shows 1930 Loss

Reports on operations of the Spaulding Pulp & Paper Company at Newberg, Oregon show operating deficit for the year of \$2,635, exclusive of depreciation which is placed at \$25,645, making a total deficit of \$28,881.

The loss is attributed to a demoralized market, which in the closing months of 1930 saw pulp fall to \$45 a ton, delivered, in contrast to prices of \$55 prevailing the first of the year. The Spaulding mill has a daily capacity of 75 tons of unbleached sulphite pulp.

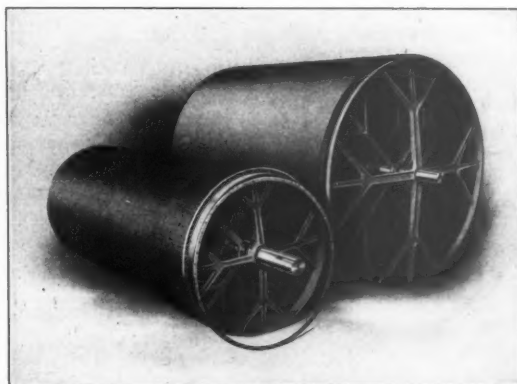
The company plans to float a \$250,000 trust mortgage note issue for the purpose of funding current indebtedness in order that capital may be released for operating purposes. On the December 31, 1930 balance sheet the company had a current operating deficit of \$150,611; quick assets \$100,944, against current liabilities of \$251,556. Quick assets excluded \$34,517 of stock subscription notes. Depreciated plant value was \$846,467. During 1930 company added a wet machine-drier at cost of \$67,017, making total capital improvements during 1929 and 1930 of \$177,336, practically all of which was raised through shockholder loans.

At the stockholders' meeting on March 4 the following officers were re-elected: President, Charles K. Spaulding; Vice-President, J. C. Compton; Treasurer, Lynn B. Ferguson; Secretary, A. C. Littig. The first three are on the board of directors with the following others: A. J. Lewthwaite, a well known figure in the Coast pulp and paper industry; E. S. Collins, capitalist and timber owner; Clarence J. Edwards, Tillamook banker; W. E. Wright; N. C. Bowles; George W. James; Oscar J. Closset; E. Fred Emery; C. L. Starr, and H. C. Spaulding.



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Repair Parts

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### Neah Bay Breakwater Project Vetoed

It looks like the pulpwood operators, fishermen, shipping interests and others didn't make their case strong enough in presenting data for the construction of a breakwater and harbor of refuge at Neah Bay, most northwesterly tip of Washington and the United States.

The War Department, under whose jurisdiction such projects come, advised on April 1 that the preliminary report authorized by the act of Congress approved July 3, 1930 was unfavorable to the improvement.

The principal grounds upon which the adverse conclusions are based are: that a harbor of refuge at Neah Bay for general shipping is not needed, and that the value of such harbor to the fishing interests and the benefits of a protected harbor to the local shipping are not, taken together, great enough to justify the cost of a breakwater system.

### North American News Print Production February, 1931

The News Print Service Bureau's Bulletin No. 158, states that production of news print paper in Canada during February, 1931, amounted to 164,552 tons and shipments to 162,350 tons. Production in the United States was 88,788 tons and shipments 90,901 tons, making a total United States and Canadian news print production of 253,340 tons and shipments of 253,251 tons.

During February, 23,073 tons of news print were made in Newfoundland and 1,318 tons in Mexico, so that the total North American production for the month amounted to 277,731 tons.

The Canadian mills produced 49,123 tons less in the first two months of 1931 than in the first two months of 1930, which was a decrease of 12%. The output in the United States was 45,671 tons or 19% less than for the first two months of 1930. Production in Newfoundland was 4,298 tons or 10% more in the first two months of 1931 than in 1930 and in Mexico 811 tons less, making a continental decrease of 91,307 tons or 13%.

During February the Canadian mills operated at 55.4% of rated capacity, United States mills at 65.4% and Newfoundland at 98.7%. Stocks of news print paper at Canadian mills totaled 42,259 tons at the end of February and at United States mills 33,627 tons, making a combined total of 75,886 tons which was equivalent to 4.2 days' average production.

### NORTH AMERICAN PRODUCTION

	Canada	U. S.	Newfound- land	Mexico	Total
1931—February	164,552	88,788	23,073	1,318	277,731
Two Months	347,209	190,778	48,659	2,405	589,051
1930—Two Months	396,332	236,449	44,361	3,216	680,358
1929—Two Months	401,872	227,466	39,431	3,249	672,018
1928—Two Months	376,946	231,827	34,984	2,809	646,166
1927—Two Months	313,710	255,348	31,803	2,189	603,050
1926—Two Months	275,351	269,691	26,545	1,916	573,503
1925—Two Months	237,414	243,710	10,498	1,866	493,488
1924—Two Months	222,847	250,916	11,077	1,916	486,756

### IMPORTS OF PULP WOOD AND WOOD PULP INTO THE UNITED STATES BY COUNTRIES AND CUSTOMS DISTRICTS

January, 1931

Compiled by the U. S. Department of Commerce, Bureau of Foreign and Domestic Commerce  
(Figures Subject to Revision.)

COUNTRIES—	PULP WOODS				WOOD PULP				SODA PULP			
	Rough Spruce Cords	Rough Dollars	Other Cords	Other Dollars	Peeled Spruce Cords	Peeled Dollars	Other Cords	Other Dollars	Rosced Spruce Cords	Rosced Dollars	Other Cords	Other Dollars
Canada and total.	267	3,602	—	—	36,862	380,825	30,177	272,820	1,103	12,784	—	—
Total Pulpwood Imports, January, 1931—68,409 Cords; \$730,031.												

COUNTRIES—	WOOD PULP				WOOD PULP				WOOD PULP				SODA PULP			
	Mechanically Unbleached Tons	Mechanically Ground Dollars	Ground Bleached Tons	Ground Bleached Dollars	Chemical Unbleached Sulphite Tons	Chemical Unbleached Sulphite Dollars	Chemical Bleached Sulphite Tons	Chemical Bleached Sulphite Dollars	Chemical Unbleached Sulphate Tons	Chemical Unbleached Sulphate Dollars	Chemical Bleached Sulphate Tons	Chemical Bleached Sulphate Dollars	Soda Pulp, Unbleached and Bleached Tons	Soda Pulp, Unbleached and Bleached Dollars	Soda Pulp, Unbleached and Bleached Tons	Soda Pulp, Unbleached and Bleached Dollars
Austria	—	—	—	—	175	8,944	100	5,681	—	—	—	—	—	—	—	—
Belgium	—	—	—	—	83	3,153	509	25,873	—	—	—	—	—	—	—	—
Czechoslovakia	—	—	—	—	9,373	425,885	234	11,773	—	—	—	—	—	—	—	—
Finland	677	15,990	925	23,172	941	48,294	3,297	224,392	535	21,331	114	5,766	—	—	—	—
Germany	—	—	—	—	100	4,349	—	—	—	—	—	—	—	—	—	—
Lithuania	—	—	—	—	1	40	—	—	—	—	—	—	—	—	—	—
Netherlands	—	—	—	—	1,125	62,044	2,877	157,337	1,117	39,361	—	—	—	—	—	—
Norway	—	—	200	5,122	58,211	2,679,552	13,035	649,797	25,714	959,908	6,074	221,779	—	—	—	—
Sweden	1,007	26,566	142	3,799	260	9,702	—	—	—	—	—	—	—	—	—	—
Yugo. and Albania	—	—	—	—	7,945	363,938	11,157	763,700	3,774	225,017	1,740	157,360	299	16,789	—	—
Canada	9,901	266,371	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	11,585	308,527	1,267	32,093	78,214	3,605,901	32,228	1,895,516	31,140	1,245,617	7,928	384,905	299	16,789	—	—

CUSTOMS DISTRICTS—																
Main and New Hampshire	2,077	65,818	759	18,989	7,936	379,756	4,946	322,961	2,900	113,860	—	—	—	—	—	—
Vermont	1,062	24,596	—	—	495	23,274	850	58,888	3,030	118,873	1,715	155,302	96	3,900	—	—
Massachusetts	225	4,061	—	—	20,350	928,754	3,573	205,273	9,486	333,964	109	5,559	—	—	—	—
St. Lawrence	1,123	31,766	—	—	934	53,125	1,752	117,326	209	11,571	—	—	153	10,275	—	—
Rochester	91	3,282	—	—	85	3,661	27	1,621	—	—	—	—	—	—	—	—
Buffalo	808	20,773	—	—	2,640	110,833	840	57,103	45	2,055	—	—	—	—	—	—
New York	1,683	30,000	75	1,708	11,054	509,373	618	35,951	1,315	55,050	—	—	—	—	—	—
Philadelphia	307	7,499	100	2,325	8,105	381,116	2,214	148,475	2,664	93,799	5	207	—	—	—	—
Maryland	—	—	200	5,272	17,640	869,140	12,088	594,902	6,331	265,454	6,074	221,779	—	—	—	—
Virginia	455	13,327	—	—	3,414	168,767	364	22,399	4,370	152,425	—	—	—	—	—	—
Mobile	—	—	—	—	83	3,153	—	—	—	—	—	—	—	—	—	—
New Orleans	224	4,588	—	—	451	26,656	—	—	—	—	—	—	—	—	—	—
Los Angeles	473	12,681	142	3,799	3,406	95,296	—	—	—	—	—	—	—	—	—	—
San Francisco	—	—	—	—	344	17,555	33	1,777	362	7,518	—	—	—	—	—	—
Washington	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Dakota	338	10,829	—	—	—	—	—	—	266	10,588	—	—	—	—	—	—
Duluth and Superior	904	18,856	—	—	199	4,575	26	1,559	—	—	—	—	—	—	—	—
Michigan	1,813	60,451	—	—	858	30,867	4,897	327,281	162	10,460	25	2,058	50	2,614	—	—
Total	11,585	308,527	1,267	32,093	78,214	3,605,901	32,228	1,895,516	31,140	1,245,617	7,928	384,905	299	16,789	—	—

Total Pulp Imports, All Grades, January, 1931—162,661 Tons; \$7,489,348.

### Ross Engineers Survey Coast Mills

E. G. Drew, Pacific Coast resident engineer for the J. O. Ross Engineering Corporation, has just completed a visit to practically all of the pulp and paper mills on the Pacific Coast in company with A. B. Clark, president of the corporation. Mr. Clark was very much impressed with respect to the industry as a whole on the Coast.

The J. O. Ross Engineering Corporation is thoroughly cognizant of the importance of the developing of



E. G. DREW  
Pacific Coast  
Resident Engineer,  
J. O. Ross Engineering  
Corporation

the pulp and paper industry of the Coast, Mr. Clark pointed out; and it was their desire to serve the far West mills most effectively that led to the appointment of Mr. Drew as their Pacific Coast resident engineer three years ago.

Mr. Clark said: "We realized long distance correspondence was too slow and not satisfactory; and that real service could only be given this growing field by placing a capable engineer in the territory. Mr. Drew served a long apprenticeship in our New York and Chicago offices, and was qualified by experience to meet the problems of drying, ventilating and air conditioning in the field. His placement in the Portland office, therefore, provided a short cut for Pacific Coast operators and enabled them to save considerable time by taking their problems to him directly."

Mr. Drew in the three years he has served the Pacific Coast mills has designed and supervised the installation of many Ross systems, indicating that the Western mills realize that, mild climate notwithstanding, greater economies are possible if close study is made of ventilation and drying.

Mr. Clark continued, "The man in the mill simply hasn't the time to become thoroughly versed in every subject which touches upon the manufacture of his immediate product. Management everywhere recognizes the primary principle of delegating responsibilities. In pulp and paper manufacture where the efficient practice of today involves a complication of processes, such delegation with its attendant reliance upon men possessed of specialized knowledge is increasingly noticeable.

"Fundamentally, the job of the management and the department heads in this industry is to make pulp and paper. In times like the present when selling prices dictate the closest scrutiny of mill costs every possible manufacturing economy is carefully examined. The hitherto 'intangible' savings are re-examined. The practical operating men are in a more receptive frame

of mind to investigate those refinements in operating practice which make possible greater cutting of corners.

"Further, there is a greater tendency to accept the specialized experience of outside experts in solving mill operating problems which involve the application of principles not directly in the province of actual pulp or paper manufacture.

"There is a growing realization by progressive management that the specialist has a rounded out practical experience to lend to the problem at hand which is invaluable to the operator. This realization manifests itself in an ever widening consultation with experts specializing in steam generation, material handling, bleaching, chemical recovery, ventilation, and other problems directly allied with the actual manufacture of pulp and paper."

### Camas Adds Machine No. 12

Resident manager J. E. Hanney, of the Crown Willamette Paper Company's 350-ton specialty paper mill at Camas, Washington, is getting things ready for the installation of another paper machine.

The machine, which will be called No. 12, will be housed in the building back of No. 11 machine room. It is a small Yankee type machine, used for machine glazed papers. It is similar to No. 10 machine which is now in operation at Camas.

Ed Tidland, master mechanic, and John Christopher left Camas for Floriston, California, early in April to supervise the tearing down, marking, packing and shipping of the machine. It is being moved from the Floriston mill, which the company recently closed down. Plans are to have the machine in operation by July 1.

### St. Regis Pulp Mill Resumes Operations

The 150-ton kraft pulp mill of the St. Regis Kraft Company, one of Tacoma's major industries, resumed operations April 14, after being shut down since Christmas. W. W. Griffith is resident general manager for the company.

The company resumed operations on a four-day-a-week schedule, and on that basis will turn out approximately 600 tons of pulp a week. Some 300 men are employed. The company has kept 30 men at work since the plant ceased production three months ago, so that the resumption of activity provided jobs for from 250 to 275 idle workers.

The shutdown was attributable largely to the glut in the kraft market and the depressed prices forced to a great degree by a heavy Swedish production struggling to hold the market.

### Everett Mill Revises Water Contract

The Puget Sound Pulp & Timber Company on March 17 signed a revised contract with the city of Everett, Washington, raising its minimum water deliveries by 50 per cent, or to 420,000,000 gallons per month.

The new contract has an "inducement" feature which anticipates future demands for even greater demands of water. This feature has been optimistically interpreted in Everett to mean early expansion of the company's new mill at Everett which has a present capacity of 175 tons of bleached sulphite pulp daily. The mill began production in August 1930.

Meanwhile, the city fathers of Everett are casting about for other potential large users of water. The new Sultan river system, completed to supply the new pulp mill as a main customer, leaves the city with a daily surplus of 42,000,000 gallons.



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**STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS  
OF AUGUST 24, 1912**

Of Pacific Pulp & Paper Industry, published monthly—except in March, when publication is semi-monthly—at Seattle, Washington, for April 1, 1931.

State of Washington, County of King,—ss.

Before me, a Notary Public in and for the State and county aforesaid, personally appeared Lawrence K. Smith, who having been duly sworn according to law, deposes and says that he is the business manager of the Pacific Pulp & Paper Industry, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management, etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 411, Postal Laws and Regulations, printed on the reverse of this form, to-wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:

Publisher, Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.  
Editor, Lloyd E. Thorpe, 71 Columbia St., Seattle, Wash.  
Managing editor (none).

Business manager, L. K. Smith, 71 Columbia St., Seattle, Wash.

2. That the owner is: (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding one per cent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a firm, company, or other unincorporated concern, its name and address, as well as those of each individual member, must be given.)

Consolidated Publishing Co., 71 Columbia St., Seattle, Wash.  
Miller Freeman, Daniel L. Pratt, Lawrence K. Smith, W. E. Crosby, G. W. Cain, all of 71 Columbia St., Seattle, Wash.

3. That the known bondholders, mortgages, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are: (If there are none, so state.) None.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the company but also, in case where the stockholder or security holder appears upon the books of the company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds or other securities than as so stated by him.

LAWRENCE K. SMITH, Business Manager.

Sworn to and subscribed before me this 7th day of April, 1931.  
(Seal) RALPH H. MOULTON.  
(My commission expires June, 1932.)

## THE HOTEL CONGRESS

The stopping place in Portland  
for Pulp and Paper Men



Sixth at Main Street  
PORTLAND  
OREGON

200 Rooms—200 Baths

Convenient Downtown  
Location.

Reasonable Rates  
Prevail

LOUIS E. BOGEL, Resident Manager

### Canadian Exports of Pulp and Paper—February, 1931

Canadian exports of pulp and paper in February were valued at \$10,934,205 according to the report issued by the Canadian Pulp and Paper Association. This was a decrease of \$456,098 from the previous month.

Wood-pulp exports for the month were valued at \$2,518,190 and exports of paper at \$8,416,015 as compared with \$2,411,533 and \$8,978,760 in the month of January.

Details for the various grades of pulp and paper are as follows.

	February, 1931		February, 1930	
	Tons	Dollars	Tons	Dollars
<b>PULP—</b>				
Mechanical	11,624	365,838	14,775	435,126
Sulphite Bleached	20,351	1,368,073	24,816	1,815,782
Sulphite Unbleached	8,137	378,761	14,937	751,669
Sulphate	5,581	362,162	9,446	521,789
Screenings	1,107	19,834	2,537	42,704
All Other	448	23,522	—	—
	47,248	2,518,190	66,511	3,567,070
<b>PAPER—</b>				
Newsprint	144,236	8,086,266	163,204	9,418,742
Wrapping	959	91,036	1,434	151,041
Book (cwts.)	1,243	15,526	4,041	37,336
Writing (cwts.)	178	1,615	215	3,084
All Other	—	221,572	—	370,660
	—	8,416,015	—	9,980,863

For the first two months of the year the exports of pulp and paper were valued at \$22,324,498. In the corresponding months of 1930 the value was \$29,554,275 so that there has been a decline this year of \$7,229,777.

Details for the various grades are given below:

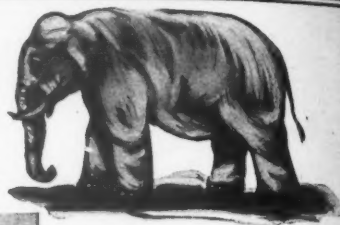
	2 Months 1931		2 Months 1930	
	Tons	Dollars	Tons	Dollars
<b>PULP—</b>				
Mechanical	26,169	794,065	36,595	1,085,822
Sulphite Bleached	36,768	2,450,471	46,435	3,497,412
Sulphite Unbleached	20,036	916,144	34,993	1,744,771
Sulphate	11,158	694,114	10,050	1,078,298
All Other	2,904	74,929	4,748	84,351
	97,035	4,929,723	141,821	7,490,654
<b>PAPER—</b>				
Newsprint	297,598	16,728,203	362,977	21,028,668
Wrapping	2,086	201,230	2,633	279,317
Book (cwts.)	3,488	32,059	8,081	70,328
Writing (cwts.)	368	4,601	321	3,801
All Other	—	428,682	—	681,507
	—	17,394,775	—	22,063,621

Pulpwood exports for the first two months of this year were 152,713 cords valued at \$1,363,172 as compared with 258,336 cords valued at \$2,400,358 in the corresponding months of last year.

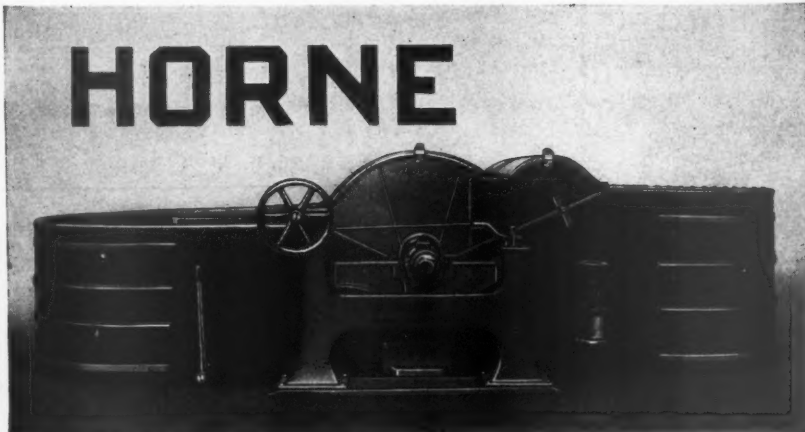
### Sumner Mill Picking Up In Production

Signs of business improvement are noted at the Sumner, Washington, board and container plant of Fibreboard Products Inc. The plant has, during the winter, operated on short weeks for much of the time, but about the first of April was again approaching full time production.

Are you using white elephants\*  
to beat your pulp?



# HORNE



\* "With the compliments of the king." A gift of a Sacred White Elephant, never to be destroyed, always to be fed. Thus his majesty paid his grudge.

Are there any white elephants among your pre-war Beaters?

Horne Beaters are modern. The moderate initial investment immediately yields heavy returns in quantity and quality.

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TRIUNE Three Ply Felts Insure Large Production  
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